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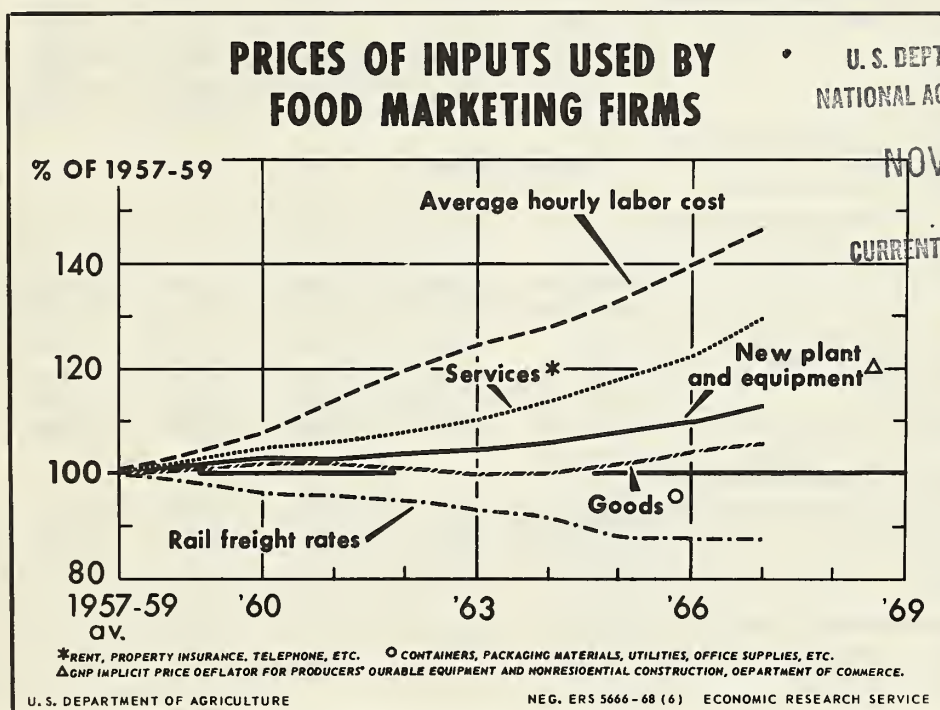
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MARKETING and TRANSPORTATION SITUATION



MTS-171

NOVEMBER 1968



IN THIS ISSUE

- Labor Productivity in Food Manufacturing
- The Freight Car Situation
- Synthetics and Agricultural Substitutes in Food and Nonfood Markets
- Effect of Weekend Prices on U.S. Average Food Prices

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STATISTICAL SUMMARY OF MARKET INFORMATION

Item	Unit or base period	1967		1968		
		Year	July-Sept.	Jan.-Mar.	Apr.-June	July-Sept.
<u>Farm-to-retail price spreads</u>	:	:	:	:	:	:
Farm-food market basket: 1/	:	:	:	:	:	:
Retail cost	Dol.	1,081	1,092	1,101	1,114	1,128
Farm value	Dol.	413	427	424	436	444
Farm-retail spread	Dol.	668	665	677	678	684
Farmer's share of retail cost	Pct.	38	39	39	39	39
<u>General economic indicators</u>	:	:	:	:	:	:
Consumers' per capita income and expenditures: 2/	:	:	:	:	:	:
Disposable personal income	Dol.	2,744	2,758	2,866	2,919	2,941
Expenditures for goods and services ..	Dol.	2,472	2,484	2,591	2,624	2,687
Expenditures for food	Dol.	477	475	492	503	509
Expenditures for food as percentage of disposable income	Pct.	17.4	17.2	17.2	17.2	17.3
	:	:	:	:	:	:
	:	1967	:	1968	:	:
	:	Year	Sept.	July	Aug.	Sept.
Hourly earnings of employees, private nonagricultural sector 3/	Dol.	2.67	2.72	2.86	2.86	2.90
Hourly earnings of food marketing employees 4/	Dol.	2.51	2.53	2.67	2.66	---
Retail sales: 5/	:	:	:	:	:	:
Food stores	Mil. dol.	6,011	5,786	6,185	6,194	6,171
Apparel stores	Mil. dol.	1,509	1,567	1,677	1,696	1,638
Manufacturers' inventories: 5/	:	:	:	:	:	:
Food and kindred products	Mil. dol.	7,094	7,010	7,376	7,434	7,405
Textile mill products	Mil. dol.	3,232	3,216	3,392	3,474	3,523
Tobacco products	Mil. dol.	2,269	2,254	2,276	2,259	2,219
Indexes of industrial production: 6/	:	:	:	:	:	:
Food manufactures	:1957-59=100	130.1	128.9	132.7	133.2	---
Textile mill products	:1957-59=100	142.2	141.3	150.7	149.4	---
Apparel products	:1957-59=100	147.7	146.8	150.7	---	---
Tobacco products	:1957-59=100	120.0	120.2	123.4	---	---
Index of physical volume of farm marketings	:1957-59=100	124	133	126	133	133
<u>Price indexes</u>	:	:	:	:	:	:
Consumer price index 7/	:1957-59=100	116.3	117.1	121.5	121.9	122.2
Wholesale prices of food 8/	:1957-59=100	108.6	109.3	113.9	112.2	113.9
Wholesale prices of cotton products 7/ ..	:1957-59=100	100.7	99.2	105.2	105.3	105.4
Wholesale prices of woolen products 7/ ..	:1957-59=100	103.2	102.7	103.9	104.1	104.1
Prices received by farmers	:1957-59=100	104	104	108	108	110
Prices paid by farmers, interest, taxes, and wage rates	:1957-59=100	117	117	121	121	122

1/ Contains average quantities of farm-originated foods purchased annually per household in 1960-61 by wage-earner and clerical-worker families and single workers living alone. Estimates of the farmer's share do not allow for direct Federal payments to producers, except for the value of wheat marketing certificates. 2/ Seasonally adjusted annual rates, calculated from Dept. of Commerce data. Percentages have been calculated from total income and expenditure data. 3/ Average hourly earnings of production workers in mining and manufacturing; construction workers in contract construction; nonsupervisory workers in wholesale and retail trade, finance, insurance, real estate, transportation, public utilities and services, Dept. of Labor. 4/ Weighted composite earnings in food processing, wholesale trade, retail food stores, calculated from data of Dept. of Labor. 5/ Seasonally adjusted, Dept. of Commerce. Sales data for 1967 are averages of monthly totals (unadjusted). Inventory data for 1967 are book values at end of year (adjusted). 6/ Seasonally adjusted, Board of Governors of Federal Reserve System. 7/ Dept. of Labor. 8/ Fresh and dried fruits and vegetables, eggs, and processed foods; Dept. of Labor.

MARKETING AND TRANSPORTATION SITUATION

Approved by the Outlook and Situation Board, November 12, 1968

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SUMMARY*

Retail prices of farm-originated foods, as measured by the "farm-food market basket," averaged 1 percent higher in July-September this year than in the preceding quarter and 3 percent higher than in third-quarter 1967. Prices of all product groups except fresh vegetables and fats and oils were higher than a year ago.

Rises in retail prices of farm foods this year have resulted from (1) increased consumer demand--arising partly from a sharp increase in disposable income, (2) decreased supplies of some foods, particularly fruits and vegetables, and (3) increased marketing charges.

Returns to farmers from these foods (farm value) in the third quarter were about 2 percent higher than in the second quarter--due to higher farm values, partly seasonal, for animal products. Compared with a year earlier, animal products, fresh fruits, and processed fruits and vegetables were each up in the third quarter this year, and returns for all foods were up 4 percent.

In the third quarter this year, farmers received an average of 39 cents of each dollar consumers spent for these foods in retail food stores--the same share as in the preceding quarter and in the third quarter last year.

The spreads between retail prices and farm values averaged 1 percent higher in the third quarter than in the second and 3 percent higher than in the third quarter of last year. The farm-retail spreads were wider than a year earlier for all product groups except poultry. Operating costs of firms marketing farm foods increased during the year, due mainly to higher labor costs and generally higher costs of materials and services.

A decrease in the farm value of the foods in the market basket is currently underway, due partly to seasonal influences. Some decline will likely continue in the first half of 1969, bringing prices to around the year-earlier levels. However, the farm-retail spread probably will widen, and the retail cost of the market basket is not expected to change appreciably from the third-quarter level.

*The summary of this report and a summary table were released to the press on November 12, 1968.

FARM-FOOD MARKET BASKET STATISTICS

Retail Cost Continues to Rise

September was the first month since November 1967 that the retail cost of the market basket of farm-originated foods ^{1/} did not increase (table 1). In the third quarter, however, the retail cost averaged \$1,128 (annual rate)--1 percent higher than in the preceding quarter and 3 percent higher than in the third quarter last year (table 2). Retail costs of all product groups except fresh vegetables and fats and oils were higher than in the second quarter and a year earlier.

Continued expansion in consumer demand for food, increases in marketing costs, and decreases in supplies of some products accounted for the rise in the retail cost. Disposable personal income per person was 7 percent higher in the third quarter than in the same period of 1967. (See table on inside of front cover.)

Farm Value Also Rises

Returns to farmers from the foods in the market basket have risen each month since November 1967 with the exception of May and August 1968 (table 1). The farm value of these foods averaged \$444 (annual rate) in the third quarter--about 2 percent higher than in the second quarter and 4 percent higher than in July-September 1967 (table 2). Animal products accounted for the increase in the farm value from the second to the third quarter of 1968. Compared with a year earlier, fresh fruits and processed fruits and vegetables in addition to animal products were up in the third quarter this year.

The rise this year in the total farm value of the foods in the market basket has resulted partly from increased consumer demand, particularly for meat products. Farm values of the meat and poultry groups were higher despite increased output of red meats.

The decline in the farm value of bakery and cereal products reflected the record 1968 wheat crop and an increased carryover. Similarly record supplies of soybeans for the 1968/69 marketing year accounted for most of the reduction in the farm value of the fats and oils group.

Farm-Retail Spread Wider in Third Quarter

The spread between the retail cost and farm value of the market basket of farm foods averaged \$684 (annual rate) in the third quarter--1 percent wider than in April-June and 3 percent wider than in the third quarter of 1967. Spreads were wider than a year earlier for all product groups except poultry. Compared with the previous quarter of 1968, spreads were wider for all product groups except meats and fresh vegetables.

The market basket farm-retail spread was comparatively stable during the first half of the year, after increasing 2 percent in the final quarter last year. In each of the first 2 quarters this year, the spread averaged between 2 and 3 percent wider than a year earlier.

Operating costs of firms marketing farm and food products increased during the year. (See pp. 9-14).

^{1/} The market basket contains the average quantities of domestic farm-originated food products purchased annually per household in 1960 and 1961 by wage-earner and clerical-worker families and single workers living alone. Its retail cost is calculated from retail prices published by the Bureau of Labor Statistics. The retail cost of the market basket foods is less than the cost of all foods bought per household, since it does not include costs of meals in eating places, imported foods, seafoods, or other foods not of farm origin. The farm value is the return to farmers for the farm products equivalent to foods in the market basket. The farm-retail spread is the difference between the retail cost and farm value. It is an estimate of total gross margin received by marketing firms for assembling, processing, transporting, and distributing the products in the market basket.

Table 1.--The market basket of farm foods: Retail cost, farm value, farm-retail spread, and farmer's share of retail cost, averages 1947-49 and 1957-59, annual 1957-67, monthly 1967-68 ^{1/}

Year and month	Retail cost	Farm value	Farm-retail spread	Farmer's share
	<u>Dollars</u>	<u>Dollars</u>	<u>Dollars</u>	<u>Percent</u>
Average:				
1947-49	890	441	449	50
1957-59	983	388	595	39
1957	953	380	573	40
1958	1,009	407	602	40
1959	985	377	608	38
1960	991	383	608	39
1961	997	380	617	38
1962	1,006	384	622	38
1963	1,013	374	639	37
1964	1,014	374	640	37
1965	1,038	408	630	39
1966	1,095	443	652	40
1967 ^{2/}	1,081	413	668	38
1968 ^{2/}	1,120	435	685	39
<u>1967 2/ 3/</u>				
January	1,083	418	665	39
February	1,074	413	661	38
March	1,069	411	658	38
April	1,063	399	664	38
May	1,064	399	665	38
June	1,080	425	655	39
July	1,091	433	658	40
August	1,098	428	670	39
September	1,088	417	671	38
October	1,083	409	674	38
November	1,080	400	680	37
December	1,086	408	678	38
<u>1968 2/ 3/</u>				
January	1,098	417	681	38
February	1,100	424	676	39
March	1,105	431	674	39
April	1,110	439	671	40
May	1,114	435	679	39
June	1,117	435	682	39
July	1,124	450	674	40
August	1,132	438	694	39
September	1,128	443	685	39

^{1/} Retail cost of average quantities purchased annually per household in 1960-61 by urban wage-earner and clerical-worker families and single workers living alone, calculated from retail prices collected by the Bureau of Labor Statistics. Data for earlier years are published in Farm-Retail Spreads for Food Products 1947-64, ERS-226, April 1965.

^{2/} Preliminary.

^{3/} Annual rates.

Table 2.--The market basket of farm foods: Retail cost, farm value, and farm-retail spread, July-September 1968, April-June 1968, and July-September 1967

Items	July-Sept.	Apr.-June	July-Sept.	Change: July-September 1968 from			
	1968	1968	1967	Apr.-June 1968		July-Sept. 1967	
	Dol.	Dol.	Dol.	Dol.	Pct.	Dol.	Pct.
	Retail cost <u>1/</u>						
Market basket.....	1,128.37	1,113.59	1,092.38	14.78	1	35.99	3
Meat products.....	327.46	321.99	323.76	5.47	2	3.70	1
Dairy products.....	203.19	200.96	195.48	2.23	1	7.71	4
Poultry.....	48.76	48.01	46.93	.75	2	1.83	4
Eggs.....	39.66	34.06	34.87	5.60	16	4.79	14
Bakery and cereal products.....	170.20	169.13	168.77	1.07	1	1.43	1
Fresh fruits.....	57.92	53.53	49.12	4.39	8	8.80	18
Fresh vegetables.....	70.25	75.73	70.76	-5.48	-7	-.51	-1
Processed fruits and vegetables.....	123.83	123.03	115.81	.80	1	8.02	7
Fats and oils.....	37.90	38.09	38.51	-.19	<u>2/</u>	-.61	-2
Miscellaneous products.....	49.20	49.06	48.37	.14	<u>2/</u>	.83	2
	Farm value <u>3/</u>						
Market basket.....	443.80	436.06	426.73	7.74	2	17.07	4
Meat products.....	181.16	171.50	177.98	9.66	6	3.18	2
Dairy products.....	97.19	96.20	93.39	.99	1	3.80	4
Poultry.....	24.48	24.10	22.22	.38	2	2.26	10
Eggs.....	25.45	20.07	20.77	5.38	27	4.68	23
Bakery and cereal products.....	32.16	33.47	34.05	-1.31	-4	-1.89	-6
Fresh fruits.....	18.13	19.74	14.86	-1.61	-8	3.27	22
Fresh vegetables.....	21.54	25.42	22.65	-3.88	-15	-1.11	-5
Processed fruits and vegetables.....	25.24	25.90	21.27	-.66	-3	3.97	19
Fats and oils.....	9.19	10.32	10.55	-1.13	-11	-1.36	-13
Miscellaneous products.....	9.26	9.34	8.99	-.08	-1	.27	3
	Farm-retail spread						
Market basket.....	684.57	677.53	665.65	7.04	1	18.92	3
Meat products.....	146.30	150.49	145.78	-4.19	-3	.52	<u>2/</u>
Dairy products.....	106.00	104.76	102.09	1.24	1	3.91	4
Poultry.....	24.28	23.91	24.71	.37	2	-.43	-2
Eggs.....	14.21	13.99	14.10	.22	2	.11	1
Bakery and cereal products.....	138.04	135.66	134.72	2.38	2	3.32	2
Fresh fruits.....	39.79	33.79	34.26	6.00	18	5.53	16
Fresh vegetables.....	48.71	50.31	48.11	-1.60	-3	.60	1
Processed fruits and vegetables.....	98.59	97.13	94.54	1.46	2	4.05	4
Fats and oils.....	28.71	27.77	27.96	.94	3	.75	3
Miscellaneous products.....	39.94	39.72	39.38	.22	1	.56	1

1/ Retail cost of average quantities purchased annually per household in 1960-61 by urban wage-earner and clerical-worker families and single workers living alone, calculated from retail prices collected by the Bureau of Labor Statistics.

2/ Less than 0.5 percent.

3/ Payment to farmer for equivalent quantities of farm products minus imputed value of byproducts obtained in processing.

No Change in Farmer's Share

Farmers received an average of 39 cents of each dollar consumers spent for the market basket farm foods in retail food stores in the third quarter this year--the same share as in the first 2 quarters this year and in the third quarter last year.

How Some Commodities Fared

Pork. A seasonal rise in hog prices occurred from early June to mid-July this year. The resulting increase in the farm value of pork was accompanied by a much smaller increase in the retail price, causing a sharp but short-lived decrease in the spread for pork. Hog prices declined after mid-July, and the farm-retail spread recovered to the size it had been in June. However, the farm-retail spread for pork averaged 7 percent smaller in the third quarter than in the second (table 3)--a large enough decrease to cause a 3-percent decrease in the spread for the meat products group (table 2).

Dairy Products. The total farm value of dairy products in the market basket averaged 1 percent higher in the third quarter than in April-June and 4 percent higher than a year earlier (table 2). This rise resulted from increases in prices of Class I milk in Federal Order Markets and in most State-regulated markets. Also, the Federal Government increased the support level for milk used in manufacturing. ^{2/}

The farm-retail spread and the retail cost each increased by about the same percentage as the farm value. Consequently, the farmer's share of the retail cost did not change.

Eggs. Production of eggs has been below year-earlier levels since April. Prices producers received for Grade A large eggs increased rapidly in the third quarter

from the severely depressed prices in 1967 and in the first half of 1968. The farm-retail spread increased slightly, so the retail price went up a little more than the farm value (tables 20 and 21, pp. 40-41). In the third quarter, the retail price averaged 55.0 cents a dozen nationally, compared with 47.2 cents in the preceding quarter and 48.4 cents a year earlier. Prices have dropped from the peak reached in mid-September, but have remained above year-earlier levels.

Fresh Fruits. The retail cost of fresh fruits in the market basket averaged 18 percent higher in the third quarter than in the like period of 1967. The farm value was up 22 percent, and the farm-retail spread was 16 percent wider. Oranges accounted for much of the increase in these totals (tables 20 and 21, pp. 40-41). The crop of California Valencia oranges, which supplies most of the fresh oranges marketed in July-September, was estimated to be about half as large this year as in 1967. Retail prices and farm values of apples and grapefruit were higher than a year earlier and spreads were wider.

Processed Fruits and Vegetables. Retail cost of the processed fruits and vegetables group averaged \$124 (annual rate) in the third quarter of 1968--\$8 more than a year earlier; the farm value averaged \$25--up about \$4; and the farm-retail spread averaged \$99--\$4 wider than in the third quarter of 1967. Frozen orange juice concentrate accounted for much of the rise in the total retail cost and farm value of the group (table 20, p. 40). However, the farm-retail spread for frozen concentrate decreased (table 21, p. 41). Stocks of this product available for marketing in the third quarter were about a third smaller than a year earlier. Stocks of frozen concentrated grapefruit juice and canned citrus fruit juices also were reduced.

^{2/} The farm value of butter was 1 percent lower than a year earlier despite the rise in the price of milk for manufacturing (table 20, p. 40). Butter and nonfat dry milk are joint products in the manufacture of butter from whole milk. Part of the value of the milk is derived from the value of butter and part from the value of nonfat dry milk. During the past year, the wholesale price of nonfat dry milk increased more than the wholesale price of butter. Thus, in the third quarter this year, more of the farmer's return from milk was attributed to nonfat dry milk and less to butter.

Table 3.--Beef, pork, and lamb: Retail price, wholesale value, farm value, farm-retail spread, and farmer's share of retail price, annual 1965-67, quarterly 1967-68

Date	Retail price	Wholesale	Gross	Byproduct	Net	Farm-retail spread			
	per pound 1/	value 2/	farm value 3/	allowance 4/	farm value 5/	Total	Wholesale- retail	Farm- wholesale	Farmer's share
	Cents	Cents	Cents	Cents	Cents	Cents	Cents	Cents	Percent
Beef, Choice grade									
1965	81.4	57.6	51.6	4.8	46.8	34.6	23.8	10.8	57
1966	84.3	58.9	55.5	5.9	49.6	34.7	25.4	9.3	59
1967	84.1	59.7	54.3	5.0	49.3	34.8	24.4	10.4	59
1967									
Jan.-Mar.	82.9	57.2	53.3	5.3	48.0	34.9	25.7	9.2	58
Apr.-June	82.5	58.2	53.1	5.1	48.0	34.5	24.3	10.2	58
July-Sept.	84.9	62.4	56.5	5.1	51.4	33.5	22.5	11.0	61
Oct.-Dec.	86.0	61.1	54.5	4.8	49.7	36.3	24.9	11.4	58
1968									
Jan.-Mar.	86.4	62.0	56.1	4.7	51.4	35.0	24.4	10.6	59
Apr.-June	86.6	62.9	57.8	5.3	52.5	34.1	23.7	10.4	61
July-Sept.	87.8	64.1	58.6	5.1	53.5	34.3	23.7	10.6	61
Oct.-Dec.	---	---	---	---	---	---	---	---	---
Pork									
1965	64.1	49.5	42.1	5.5	36.6	27.5	14.6	12.9	57
1966	73.4	54.8	47.6	6.4	41.2	32.2	18.6	13.6	56
1967	67.0	48.1	39.0	4.8	34.2	32.8	18.9	13.9	51
1967									
Jan.-Mar.	66.7	47.5	38.3	5.0	33.3	33.4	19.2	14.2	50
Apr.-June	65.5	47.1	38.4	4.9	33.5	32.0	18.4	13.6	51
July-Sept.	69.4	51.4	43.1	5.0	38.1	31.3	18.0	13.3	55
Oct.-Dec.	66.5	46.5	36.1	4.2	31.9	34.6	20.0	14.6	48
1968									
Jan.-Mar.	66.1	47.0	36.7	4.3	32.4	33.7	19.1	14.6	49
Apr.-June	66.4	48.3	38.0	4.4	33.6	32.8	18.1	14.7	51
July-Sept.	68.0	50.6	41.9	4.4	37.5	30.5	17.4	13.1	55
Oct.-Dec.	---	---	---	---	---	---	---	---	---
Lamb, Choice grade									
1965	79.1	58.4	53.4	8.0	45.4	33.7	20.7	13.0	57
1966	85.6	59.8	55.5	8.4	47.1	38.5	25.8	12.7	55
1967	87.1	60.7	52.4	5.7	46.7	40.4	26.4	14.0	54
1967									
Jan.-Mar.	83.6	55.8	48.9	6.3	42.6	41.0	27.8	13.2	51
Apr.-June	85.3	62.1	54.4	6.2	48.2	37.1	23.2	13.9	57
July-Sept.	89.7	64.0	53.6	4.8	48.8	40.9	25.7	15.2	54
Oct.-Dec.	89.9	60.8	51.9	5.3	46.6	43.3	29.1	14.2	52
1968									
Jan.-Mar.	90.4	62.4	54.6	6.3	48.3	42.1	28.0	14.1	53
Apr.-June	92.7	69.1	59.6	6.2	53.4	39.3	23.6	15.7	58
July-Sept.	93.4	65.4	57.3	6.2	51.1	42.3	28.0	14.3	55
Oct.-Dec.	---	---	---	---	---	---	---	---	---

1/ Estimated weighted average price of retail cuts. 2/ Wholesale value of quantity of carcass equivalent to 1 lb. of retail cuts: Beef, 1.35 lb.; pork, 1.00 lb.; lamb, 1.14 lb. 3/ Payment to farmer for quantity of live animal equivalent to 1 lb. of retail cuts: Beef, 2.25 lb.; pork 2.00 lb.; lamb, quantity varies by months from 2.33 lb. in April to 2.38 lb. in October. 4/ Portion of gross farm value attributed to edible and inedible byproduct. 5/ Gross farm value minus byproduct allowance.

Prices and farm values of canned deciduous fruits were higher this year. Much of the supply in the third quarter consists of fruit canned in the previous year. Stocks on June 1, 1968 of 13 canned deciduous fruits totaled about 6 percent smaller than a year earlier. Farm-retail spreads for most canned and frozen fruits and vegetables were wider than in the third quarter last year.

Outlook for Rest of 1968 and First Half of 1969

The farm value of foods in the market basket has declined since the end of the third quarter, mainly because of lower prices for meat animals. Further decreases are expected in the first half of 1969, bringing the farm value to around the

year-earlier level. This decrease, however, will be offset by an increase in the farm-retail spread of the market basket, so the retail cost is not expected to change appreciably from the third quarter of 1968.

The farm-retail spread in the first half of 1969 will probably be more than 3 percent wider than in the first half of 1968. The 1957-67 increase in the spread averaged 1.6 percent per year.

The farmer's share of the consumer's dollar spent for the foods in the market basket during the first half next year probably will average 38 cents--1 cent less than in the first half of this year (table 1).

COSTS AND PROFITS IN MARKETING FARM PRODUCTS

Labor Costs

Employees in food-marketing establishments earned an average of \$2.66 per hour in August this year--6.0 percent above August a year earlier (table 4). This increase compares with a rise of 5.5 percent between August 1966 and August 1967 and an average annual rise of 3.7 percent during 1957-67.

Hourly earnings of food-marketing employees increased by about the same percentage as those of employees in similar occupations. Hourly earnings in food-manufacturing establishments averaged 5.7 percent higher in August 1968 than in August, 1967, compared with an increase of 6.0 percent in all manufacturing establishments. There was an increase of 6.7 percent for retail food store employees, compared with 8.0 percent for all retail trade. Hourly earnings increased 7.1

percent in food wholesaling compared with 5.9 percent in all wholesale trade.

Hourly earnings of food-marketing employees averaged lower than hourly earnings of employees in the entire private nonagricultural sector of the economy. (See table on inside of front cover.) Earnings averaged \$2.51 per hour for food-marketing employees in 1967, compared with \$2.68 for other employees. ^{1/}

Average hourly earnings are affected by changes in the proportion of employees in lower and higher paid occupation groups and in the number of hours of overtime for which premium rates are paid, as well as by changes in wage rates.

The cost of labor per hour worked (wages, salaries, and fringe benefits) in food marketing averaged 47 percent ^{2/} higher in 1967 than in 1957-59, but the

^{1/} Average hourly earnings of production workers in mining and manufacturing; construction workers in contract construction; nonsupervisory workers in wholesale and retail trade, finance, insurance, real estate, transportation, public utilities, and services.

^{2/} This increase in labor cost per hour is greater than the percentage increase (38 percent) in average hourly earnings shown by data in table 4. This discrepancy arises mainly because labor cost per hour includes fringe benefits, earnings of workers in away-from-home eating places, and earnings of nonproduction workers as well as averages of hourly earnings of production workers in food-manufacturing establishments and non-supervisory workers in wholesale and retail-food establishments.

Table 4.--Hourly earnings of employees of firms marketing food, tobacco, textiles, apparel and related products, averages 1947-54, annual 1955-67, monthly 1967-68

Year and month	Food	Manufacturing <u>2/</u>			Retail apparel and accessories stores <u>2/</u>
	marketing <u>1/</u>	Tobacco	Textile-mill products	Apparel and related products	
	Dollars	Dollars	Dollars	Dollars	Dollars
Average:					
1947-49	1.11	0.953	1.124	1.197	1.024
1950-54	1.38	1.19	1.32	1.32	1.16
1955	1.58	1.34	1.38	1.37	1.27
1956	1.67	1.45	1.44	1.47	1.30
1957	1.75	1.53	1.49	1.51	1.35
1958	1.82	1.59	1.49	1.54	1.39
1959	1.88	1.64	1.56	1.56	1.44
1960	1.96	1.70	1.61	1.59	1.46
1961	2.03	1.78	1.63	1.64	1.50
1962	2.10	1.85	1.68	1.69	1.55
1963	2.16	1.91	1.71	1.73	1.59
1964	2.23	1.95	1.79	1.79	1.63
1965	2.30	2.09	1.87	1.83	1.71
1966	2.40	2.19	1.96	1.89	1.79
1967	2.51	2.27	2.06	2.03	1.90
<u>1967</u>					
Jan.	2.47	2.20	2.01	1.95	1.88
Feb.	2.49	2.28	2.01	1.99	1.87
Mar.	2.50	2.34	2.02	2.00	1.87
Apr.	2.51	2.38	2.02	2.01	1.88
May	2.52	2.38	2.03	2.01	1.89
June	2.51	2.40	2.03	2.02	1.90
July	2.52	2.42	2.02	2.01	1.89
Aug.	2.51	2.25	2.04	2.05	1.87
Sept.	2.53	2.18	2.10	2.07	1.92
Oct.	2.53	2.13	2.12	2.06	1.94
Nov.	2.55	2.15	2.13	2.07	1.94
Dec.	2.57	2.22	2.14	2.08	1.92
<u>1968</u>					
Jan.	2.61	2.35	2.14	2.11	1.98
Feb.	2.63	2.47	2.16	2.18	2.00
Mar.	2.65	2.48	2.17	2.19	1.99
Apr.	2.66	2.56	2.15	2.18	2.03
May	2.68	2.61	2.17	2.19	2.03
June	2.67	2.63	2.18	2.20	2.03
July	2.67	2.64	2.17	2.19	2.04
Aug.	2.66	2.45	2.24	2.23	2.03
Sept.	---	2.36	2.26	2.25	---

1/ Weighted composite earnings of production employees in food manufacturing and nonsupervisory employees in wholesale and retail food trades calculated by the Economic Research Service from data of the U.S. Dept. of Labor.

2/ U.S. Dept. of Labor; production workers or nonsupervisory workers only.

increase in the output of products marketed per man-hour has kept the rise in labor cost per unit of product marketed down to 18 percent.

Production employees in plants manufacturing nonfood products from farm-produced raw materials also obtained increases in hourly earnings (table 4). Earnings of employees in textile mills and tobacco products plants averaged around 8 percent higher in September than a year earlier. During the same period, average hourly earnings increased nearly 9 percent in plants manufacturing apparel and related products.

Rail Transportation Charges

The combined index of railroad freight rates for agricultural commodities averaged 88 (1957-59=100) in 1967--the same as in 1966 (table 5). Indexes of rates for several groups of commodities averaged higher in 1967 than in 1966 but not enough to change the combined index.

Rail freight rates for farm products decreased for several years following 1958. The leveling off since 1965 reflects two offsetting forces. Many specific rates were reduced during 1966 and 1967, but increased costs led railroads in 1967 to seek a general rate increase. The Interstate Commerce Commission granted a general increase of about 3 percent, effective August 19, 1967. However, actual increases were not uniform in all regions or for all commodities.

The railroads proposed another general rate increase in 1968, ranging from 3 to 10 percent, which the ICC is now considering. An interim increase was granted on June 24, 1968 which allowed an increase of 3 percent.

Other Costs

Prices of goods and services (not including raw materials and labor) utilized by food-marketing firms probably will average between 3 and 4 percent higher this year than in 1967. In the first half this year, prices of goods averaged about 2 percent higher than in the same period last year, and prices of services were up 6 percent (table 6). In 1966 and

1967 and probably again this year, prices of these goods and services (as a group) increased at about double the rate in 1965 and 1964.

Interest rates charged by banks on short-term loans to business firms in 35 centers averaged 6.89 percent in August 1968, compared with 5.95 percent a year earlier. Short-term rates in a slightly different group of cities averaged 6 percent in 1966 and 1967 and 5 percent in 1964 and 1965. Long-term rates increased in 1966, in 1967, and in the first half this year, but eased slightly in the third quarter (table 6).

Profits

Food marketing corporations. Profits after taxes of corporations manufacturing food and kindred products except alcoholic beverages averaged 2.3 percent of sales in the first half of 1968, compared with 2.2 percent in the same period last year (table 7). As a percentage of stockholders' equity, profits after taxes in the first half averaged 10.3 percent, up from 9.9 percent last year. After-tax profit ratios of food-manufacturing corporations averaged lower in 1967 than in the preceding year.

Profits after taxes of 15 leading retail food chains averaged 1 percent of sales in the first half of 1968--the same as a year earlier. Profits of these chains were lower in 1967 than in 1966.

Textile, apparel, and tobacco manufacturing corporations. Profits after taxes of corporations manufacturing textile-mill products and apparel were higher in the first half this year than in the same period of 1967, both as a percentage of sales and as a percentage of stockholders' equity. Profit ratios of corporations in these industries averaged lower in 1967 than in 1966. Profit ratios of tobacco manufacturers were lower in the second quarter this year than a year earlier, although their first quarter profit ratios were up. In 1967, their after-tax profits as a percentage of sales were the same as in the preceding years, but were higher as a percentage of stockholders' equity.

Table 5.--Railroad freight rates for specified agricultural commodities, 1957-67 1/

(1957-59=100)

Year	Livestock	Meat	Fruits and vegetables	Wheat	All grains
1957	98	109	104	99	99
1958	102	100	101	101	102
1959	100	92	95	100	99
1960	99	92	93	99	98
1961	98	92	94	99	97
1962	96	91	93	96	96
1963	94	89	92	95	94
1964	93	86	92	92	92
1965	93	78	92	83	87
1966	93	76	92	82	86
1967	94	76	93	83	87
	Soybeans	Cotton	Wool	Tobacco	Combined index
1957	97	100	106	108	102
1958	102	101	108	101	101
1959	101	100	85	91	97
1960	101	99	82	90	96
1961	96	99	82	91	96
1962	94	99	72	91	95
1963	89	99	70	91	93
1964	88	98	67	91	92
1965	88	98	67	91	88
1966	88	98	67	90	88
1967	88	98	68	91	88

1/ All index number series are of the weighted aggregative type. They are based upon averages of rates in effect during the year. Annual averages are computed by weighting rates by the number of days they are in effect. In constructing the combined index, group indexes are weighted by average revenues for 1957-59. Some data have been revised.

Data for 1945-56 are published in the Marketing and Transportation Situation, MTS-147, November 1962.

Table 6.--Prices of inputs bought by food marketing firms, annual 1955-67, quarterly 1967-68

(1957-59=100)

Year and quarter	Intermediate goods and services					New plant and equipment	Yields on high-grade long-term bonds, per annum
	Total	Goods			Services		
		Total	Containers and packaging materials	Fuel, power, and light			
Percent							
1955	91	91	90	92	90	87	3.06
1956	95	96	96	96	93	92	3.36
1957	98	99	99	102	97	98	3.89
1958	100	100	101	99	100	100	3.79
1959	102	101	100	100	103	102	4.38
1960	103	102	102	102	105	103	4.41
1961	104	102	101	104	106	103	4.35
1962	104	101	102	103	108	104	4.33
1963	104	100	101	102	110	105	4.26
1964	106	100	101	102	114	106	4.40
1965	108	102	102	102	118	108	4.49
1966	112	104	106	103	123	110	5.13
1967	116	106	107	104	130	114	5.51
1967							
Jan.-Mar. . . .	114	106	107	105	126	112	5.12
Apr.-June . . .	115	106	107	105	128	113	5.26
July-Sept. . .	116	106	107	104	131	114	5.62
Oct.-Dec. . . .	117	107	108	104	133	115	6.03
1968							
Jan.-Mar. . . .	118	107	109	103	134	116	6.13
Apr.-June . . .	119	109	111	103	136	117	6.25
July-Sept. . .	---	---	---	---	---	---	5/6.13
Oct.-Dec. . . .	---	---	---	---	---	---	---

^{1/} Also includes prices of office supplies, restaurant supplies, and many other goods.

^{2/} Rent, property insurance and maintenance, telephone, etc.

^{3/} Implicit price deflator for investment in nonresidential structures and producers' durable equipment, gross national product, U.S. Dept. of Commerce.

^{4/} Aaa corporate bonds; Moody's Investor Service.

^{5/} 2-month average.

Table 7.--Net profits (less provision for taxes on income) as percentage of stockholders' equity and sales of manufacturers of food, textiles, apparel and tobacco, and 15 retail food chains, annual 1956-67, quarterly 1967-68

Year and quarter	Profits as percentage of stockholders' equity				
	Manufacturing corporations 1/				15 retail food chains 3/
	Food 2/	Textile-mill products	Apparel and other finished products	Tobacco	
	Percent	Percent	Percent	Percent	Percent
1956	---	5.4	8.1	11.7	---
1957	8.8	4.0	6.3	12.5	14.9
1958	9.2	3.5	5.0	13.5	14.5
1959	9.6	7.5	8.7	13.5	13.4
1960	9.2	5.8	7.7	13.5	13.0
1961	9.4	5.0	7.3	13.8	12.0
1962	9.2	6.2	9.3	13.2	11.7
1963	9.3	6.1	7.7	13.4	11.4
1964	10.4	8.6	11.9	13.4	11.5
1965	11.0	10.9	12.8	13.4	11.3
1966	11.5	10.3	13.8	14.3	11.4
1967	11.1	7.6	12.2	14.6	10.3
<u>1967</u>					
Jan.-Mar.	9.7	5.9	9.6	12.1	---
Apr.-June	10.3	7.1	8.6	14.7	---
<u>1968</u>					
Jan.-Mar.	10.4	7.1	12.0	13.5	---
Apr.-June	10.3	9.1	9.3	13.6	---
Year and quarter	Profits as percentage of sales				
	Food 2/	Textile-mill products	Apparel and other finished products	Tobacco	15 retail food chains 3/
	Percent	Percent	Percent	Percent	Percent
1956	---	2.4	1.6	5.0	---
1957	2.1	1.8	1.3	5.2	1.3
1958	2.1	1.6	1.0	5.4	1.3
1959	2.3	3.0	1.5	5.4	1.3
1960	2.2	2.5	1.4	5.5	1.3
1961	2.2	2.1	1.3	5.7	1.2
1962	2.2	2.4	1.6	5.7	1.2
1963	2.2	2.3	1.4	5.9	1.2
1964	2.5	3.1	2.1	5.9	1.3
1965	2.6	3.8	2.3	5.9	1.2
1966	2.5	3.6	2.4	5.9	1.2
1967	2.4	2.9	2.3	5.9	1.1
<u>1967</u>					
Jan.-Mar.	2.2	2.4	1.8	5.1	1.0
Apr.-June	2.3	2.7	1.7	5.8	1.0
<u>1968</u>					
Jan.-Mar.	2.4	2.7	2.5	5.7	1.0
Apr.-June	2.3	3.2	1.9	5.5	1.0

1/ Compiled from data in Quarterly Financial Report for Manufacturing Corporations 1957-68 issues, published by the Federal Trade Commission and Securities and Exchange Commission.

2/ Food and kindred products excluding alcoholic beverages.

3/ Compiled from Moody's Industrial Manual and company annual reports.

RECENT DEVELOPMENTS IN MARKETING

Volume of Products Marketed

The volume of products marketed by farmers in 1968 is expected to be 2 percent larger than in 1967. Marketings of crops probably will be 6 percent larger, but no change is expected in marketings of livestock and livestock products.

Production by food manufacturing industries, as reported by the Federal Reserve Board, averaged 1 percent more in the first 8 months this year than in the same period of 1967. Textile mill output was up almost 8 percent. During the first 7 months, output of the apparel industry was up 3 percent, and the tobacco industry's output gained 1 percent.

Sales by retail food stores in the first 8 months of 1968 were 7 percent larger than during the same period of 1967. Prices of foods in these stores were up 3 percent. Sales in eating places were 11 percent larger, and prices averaged 5 percent higher.

Exports of Farm Products

Exports of farm products totaled \$6.3 billion in the fiscal year ended June 30, 1968--7 percent below the record level of 1967. Commercial exports

(excluding barter) made up \$4.7 billion of the 1968 total--\$485 million less than in fiscal 1967. Substantial declines occurred in the export value of animals and animal products, cotton, tobacco, and fruits. Values of rice and oil cake and meal exported rose to record levels in the year ended June 30, 1968. The increased value of rice exports resulted from a larger volume as well as from higher prices. Exports of soybeans rose to a new record of 265 million bushels, but the value of soybeans exported decreased slightly because of substantially lower prices.

Investments in Plant and Equipment

Investments in plant and equipment by firms manufacturing foods and beverages this year are expected to equal the record spent in 1967 (table 8). Investments by textile manufacturers, however, will decline for the second successive year, although the total this year will be larger than in the early 1960's. Railroads are expected to invest about the same amount in 1968 as in 1967. As in other recent years, investments of other transportation companies have continued upward.

Table 8.--Investments in new plant and equipment by firms processing and transporting farm products, 1960-68

Year	Processing industries		Transportation	
	Food and beverage	Textile	Railroad	Other than rail
	<u>Billion dollars</u>	<u>Billion dollars</u>	<u>Billion dollars</u>	<u>Billion dollars</u>
1960	0.92	0.53	1.03	1.94
1961 .....	.98	.50	.67	1.85
1962 .....	.99	.61	.85	2.07
1963 .....	.97	.64	1.10	1.92
1964	1.06	.76	1.41	2.38
1965	1.24	.98	1.73	2.81
1966	1.39	1.13	1.98	3.44
1967	1.41	.89	1.53	3.88
1968 1/ ...	1.41	.79	1.52	4.55

1/ Estimates based on reports by business in late July and August 1968.

Data from Securities and Exchange Commission and Department of Commerce.

LABOR PRODUCTIVITY IN FOOD MANUFACTURING

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Labor productivity--output per man-hour--in factories processing farm-originated foods increased 85 percent from 1947 to 1967, according to recent estimates (table 9). ^{1/} In other words, only 54 percent as many man-hours were required per unit of output in 1967 as in 1947. Except for a small decline in 1948 and no change in 1951, output per man-hour has increased every year since 1947.

Output of factories processing farm foods increased 71 percent from 1947 to 1967 (preliminary estimate). ^{2/} Except for a small decrease in 1948 and no change in 1957, factory output increased in every year.

The larger increase in output per man-hour than in total output resulted in a decline (8 percent) in total man-hours worked in food manufacturing during 1947-67. All industries except processed fruits and vegetables had a decline in number of man-hours.

During 1947-67, output per man-hour in food manufacturing increased at an average annual rate of 3.5 percent, with gains in all food-manufacturing industries (table 10). The sugar industry had the largest average increase (4.9 percent). Other industries having above-average increases were dairy products, grain mill products, meat products, and processed fruits and vegetables. Bakery products had the smallest increase (2.2 percent).

Comparison of 1947-56 to 1957-67

Labor productivity in food manufacturing increased at a faster rate in the

past decade than during the previous decade. During 1957-67, output per man-hour rose by 3.8 percent per year, compared with 2.7 percent during 1947-56. During 1957-67, all industries, except processed fruits and vegetables and sugar products, had larger rates of increase in output per man-hour than during 1947-56.

Increases in labor productivity in the grain mill and bakery industries during 1957-67 were almost triple the rates during 1947-56. The confectionery industry almost doubled its rate of growth in labor productivity. Smaller, but significant, gains also occurred in the meat and dairy-manufacturing industries between 1947-56 and 1957-67.

The processed-fruits-and-vegetables industry had the largest annual increase in factory output in both periods, 5.0 percent during 1947-56, and 4.6 percent in 1957-67. The sugar-products industry also had an annual increase of 4.6 percent in 1957-67.

Dairy-products industry had comparatively large annual decreases in the number of man-hours--2.6 percent during 1947-56, and 2.5 percent during 1956-67.

Comparison With Other Sectors

The average annual rate of growth in output per man-hour in 1957-67 was higher for food-manufacturing industries than for all manufacturing industries and for the entire private sector of the economy.

^{1/} Data in this article are regularly computed by the Economic Research Service. A comprehensive report, including a discussion of methods, sources and limitations of the data, was published in Output per Man-Hour in Factory Processing of Farm-Food Products, by William H. Waldorf, Tech. Bull. 1243, ERS, U.S. Dept. of Agr., Washington, D.C., May 1961 (out of print). Data are for manufacturing establishments primarily engaged in processing domestically produced farm foods except fluid milk, cream, and eggs which were excluded because of incomplete data. Factory processing of imported foods, seafoods, and other foods not originating on domestic farms and manufacture of alcoholic and nonalcoholic beverages also were excluded.

^{2/} The output index (table 9) measures the approximate value added by manufacturing in constant dollars (net physical output).

Table 9.--Output per man-hour, output, and total man-hours in manufacturing farm-originated foods, by industry, 1947-67 1/

Year	(1957-59=100)						Manufactured dairy products 4/						Processed fruits and vegetables 5/					
	All foods 2/			Meat products 3/			Output			Output			Output			Output		
	Output	Man- hours	per man- hour 6/	Output	Man- hours	per man- hour 6/	Output	Man- hours	per man- hour 6/	Output	Man- hours	per man- hour 6/	Output	Man- hours	per man- hour 6/	Output	Man- hours	per man- hour 6/
1947	78	104	75															
1948	76	102	74				81	106	77				92	139	66	64	101	64
1949	77	101	77				74	101	73				85	129	66	66	97	68
1950	80	102	78				76	104	73				84	116	72	69	94	73
1951	81	104	78				78	104	75				83	123	67	70	95	74
1952	84	106	79				77	107	72				79	115	69	82	104	79
							81	109	74				79	113	70	81	100	81
1953	86	100	86															
1954	87	99	88				87	106	82				83	116	72	85	106	89
1955	90	101	90				89	105	85				83	106	78	85	94	90
1956	97	103	93				97	107	91				87	108	81	90	95	95
1957	97	101	95				103	111	93				93	107	87	102	99	103
1958	99	89	100				101	105	96				97	106	92	97	100	97
							97	89	89				100	89	8/103	98	8/99	8/98
1959	104	100	104															
1960	107	100	107				102	98	105				103	97	106	105	101	104
1961	111	99	112				107	97	111				106	100	105	112	103	109
1962	116	98	118				108	93	116				111	98	113	121	104	116
1963	118	95	125				110	92	120				114	92	123	130	104	125
1964	124	97	128				116	91	128				115	85	135	126	102	123
							124	97	129				120	84	142	134	104	129
1965	125	96	130															
1966	129	96	134				121	90	134				120	82	146	137	108	128
1967	133	96	139				126	88	143				117	84	140	145	111	131
							132	90	147				120	83	144	150	108	139

Data for 1964-67 are preliminary.

1/ Man-hour indexes for all employees and hours worked; figures for 1948 and 1967 interpolated from Bureau of Labor Statistics data on all employees and hours paid for. 2/ Includes poultry-dressing plants and establishments primarily engaged in manufacturing shortening and cooking oils, margarine, macaroni, and spaghetti, as well as industry groups shown in this table. The series includes food manufacturing in Alaska and Hawaii since 1958. 3/ Includes meat-packing plants and establishments specializing in prepared meat products. 4/ Includes establishments primarily engaged in manufacturing creamery butter, natural cheese, concentrated milk, ice cream and ices, and special dairy products; excludes processing of fluid milk and cream. 5/ Includes establishments primarily engaged in canning fruits and vegetables, dehydrating fruits and vegetables, freezing fruits and vegetables, and manufacturing pickles and sauces. 6/ Computed from unrounded figures. 7/ Census Bureau revised sampling plan and universe in annual survey of manufacturers beginning in 1953. Thus, data for 1953 and later years are not strictly comparable with those for earlier years. 8/ Data for all industry groups cover Alaska and Hawaii starting with 1958. Post 1958 years have been made comparable with earlier years.

Continued--

Table 9.---Output per man-hour, output, and total man-hours in manufacturing farm-originated foods, by industry, 1947-67 1/--Continued

(1957-59=100)

Year	Grain-mill products 2/			Bakery products 10/			Sugar 11/			Confectionery 12/		
	Output	Man- hours	per man- hour 6/	Output	Man- hours	per man- hour 6/	Output	Man- hours	per man- hour 6/	Output	Man- hours	per man- hour 6/
1947	94	123	77	85	97	88	82	137	60	88	118	75
1948	89	117	76	86	101	86	68	118	58	90	122	74
1949	83	111	75	88	100	88	75	111	68	87	118	74
1950	84	111	75	89	100	89	92	124	74	93	125	75
1951	86	113	76	92	104	89	69	116	59	89	105	85
1952	86	122	71	96	106	90	72	113	64	90	110	82
1953	87	112	77	92	96	95	82	7/122	7/68	90	7/104	7/87
1954	87	102	85	91	97	94	89	104	86	86	101	85
1955	88	106	83	92	98	94	80	97	82	85	103	83
1956	92	104	88	95	100	95	87	95	92	90	105	85
1957	95	101	95	96	100	96	94	98	96	96	101	95
1958	100	8/99	8/101	101	8/100	8/101	98	8/101	8/97	100	8/100	8/100
1959	105	101	104	103	101	102	108	101	107	104	99	105
1960	109	101	108	104	101	103	110	99	111	107	99	108
1961	114	100	114	105	99	106	118	102	115	110	100	110
1962	119	99	120	108	98	110	123	98	126	111	101	110
1963	125	93	135	110	92	120	145	107	135	116	96	122
1964	129	94	137	114	92	123	151	116	131	121	98	123
1965	129	93	139	115	91	127	140	108	130	124	98	126
1966	131	92	143	115	90	128	143	105	136	131	99	132
1967	131	92	142	122	92	132	140	99	142	134	95	140

Data for 1964-67 are preliminary.

2/ Includes establishments primarily engaged in manufacturing flour and meal, cereal products, rice milling, blended and prepared flour, and corn wet milling products. 10/ Includes establishments primarily engaged in manufacturing biscuits and crackers, whole-sale bakeries, grocery chain bakeries, home-service bakeries, and retail multi-outlet bakeries (excluding nonbaking outlets except those retail units at the same location as the bakery). In 1954, establishments which were part of a chain and were producing for direct sale on premises were reclassified from the Census of Manufacturers to the Census of Retail Trade; however, this did not significantly affect comparability of series between 1947 and 1954. Establishments which bake primarily for direct sale to consumers are not included. 11/ Includes establishments primarily engaged in manufacturing raw cane sugar from domestically grown cane and plants mainly engaged in the production of beet sugar. 12/ Includes establishments primarily engaged in manufacturing candy and other confections.

Table 10.--Average annual change in output per man-hour, output, and total man-hours in manufacturing farm-originated foods, by industry, 1947-67 ^{1/}

Industry group	1947-67			1947-56			1957-67		
	Output:			Output:			Output:		
	Out-: Man-: per	put : hours : man-	hour :	Out-: Man-: per	put : hours : man-	hour :	Out-: Man-: per	put : hours : man-	hour :
	Pct.	Pct.	Pct.	Pct.	Pct.	Pct.	Pct.	Pct.	Pct.
All farm foods	3.0	-.4	3.5	2.5	-.2	2.7	3.3	-.6	3.8
Meat products	2.9	-1.0	4.0	3.4	.6	2.7	3.0	-1.3	4.4
Dairy products	2.3	-2.3	4.8	.2	-2.6	2.9	2.2	-2.5	4.8
Processed fruits and vegetables	4.4	.6	3.7	5.0	-.2	5.2	4.6	1.0	3.6
Grain mill products	2.6	-1.4	4.1	<u>2/</u>	-1.5	1.6	3.4	-1.1	4.5
Bakery products	1.7	-.5	2.2	1.0	-.1	1.2	2.1	-1.2	3.4
Sugar products	4.1	-1.0	4.9	1.3	-3.0	4.6	4.6	.7	4.0
Confectionery products	2.3	-1.1	3.4	-.2	-2.1	1.9	3.3	-.4	3.7

^{1/} Based on table 9.^{2/} Less than 0.1 percent increase.

In contrast, during 1947-56, the annual rate of growth was lower for food manufacturing than for all manufacturing and for the private sector. Annual rates of growth in labor productivity in the private sector of the economy are shown below: ^{3/}

	1947-67	1947-56	1957-67
	- - - - - Percent - - - - -		
Total	3.2	3.6	3.3
Nonfarm	2.7	2.9	2.9
Manufacturing:			
All	2.9	3.1	3.5
Farm-food ..	3.5	2.7	3.8

Factors Affecting Output Per Man-Hour

Several factors have contributed to the postwar rise in labor productivity. Improvements in technology have probably been the most outstanding factors. Many

technological innovations have been adopted, such as cattle-on-the-rail dressing system, continuous processes, automation, and conveyerization. Development of new products utilizing new technologies may also have helped raise output per man-hour. The adoption of technological improvements has resulted in a substitution of capital for labor, and involved an increase in expenditures for plant and equipment.

Expenditures for new plant and equipment by all firms manufacturing food and beverages averaged \$1.35 billion during 1965-67, up 78 percent from 1954-56. ^{4/} Expenditures were relatively stable throughout the 1950's, increased slowly in the early 1960's, and accelerated in the mid-1960's.

* Expenditures by the food-and-kindred-products industry on research and

^{3/} Average annual rates of growth in output per man-hour worked in the private sector were computed from annual estimates by the Bureau of Labor Statistics reported in Handbook of Labor Statistics, 1968. All average annual rates of change were obtained by fitting exponential curves by least squares (Glover's method) to annual data.

^{4/} Office of Business Economics, 1967 Business Statistics, Washington, D.C., 1968, p. 9.

development amounted to \$166 million in 1966, an increase of 159 percent over 1956. ^{5/} The food-and-kindred-products industry also benefited from expenditures for research and development by the chemical industry, food machinery industry, electrical industry, universities and Government agencies.

Along with the technological changes, an improvement in the quality of management and labor has also contributed to higher labor productivity. This has resulted from increased emphasis on education and on-the-job training.

^{5/} Estimates from National Science Foundation.

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THE FREIGHT CAR SITUATION

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Grain and lumber shippers have been particularly affected by freight car shortages in the past. This year may be no exception. In Service Order No. 1009 dated October 4, 1968, the Interstate Commerce Commission indicated, "That there are shortages of freight cars throughout the country...and that these shortages of freight cars are impeding the movement of agricultural...products...." The service order became effective on October 7, 1968, and, among other provisions, prohibits back-hauling empty boxcars to obtain a load and holding empty boxcars awaiting a load for more than 24 hours.

The factors contributing to periodic car shortages and the corrective measures that have been taken were discussed in the November 1966 Marketing and Transportation Situation (MTS-163). The purpose of this article is to indicate the changes in the demand for and effective supply of rail cars since 1966.

Expanding Demand for Cars

Continuing rapid growth in economic activity is probably the major demand factor bearing on the current car shortage. Gross national product has risen from a seasonally adjusted annual rate of \$795.3 billion in the third quarter of 1967 to \$870.8 billion for the same quarter of 1968. Reflecting economic growth, total ton-miles of intercity traffic have shown a steady increase since 1961 (table 11). Railway ton-miles have shown a similar growth except for 1967 when a 4-percent reduction in wheat, feed grain, and soybean exports reduced rail and barge loadings.

An estimated 3-percent increase over 1967 in U.S. production of grains and soybeans has increased the demand for transportation this year. The increase demand will continue into 1969.

Freight Car Numbers

The total supply of freight cars operated by Class I railroads--owners of 82 percent of the Nation's freight cars--

declined more than 14,000 between 1966 and 1967 (table 12). Partially offsetting was an increase of about 8,700 cars owned by car companies and shippers, holding the net decline to slightly more than 6,000 cars during 1967.

Plain boxcars, still the principal car used in grain gathering, showed a total decline of more than 28,500 cars in 1967. This decline is part of a long-term trend. From 1957 through 1967, the number of plain boxcars decreased by 255,848. According to a publication of the Association of American Railroads (Statistics of Railroads of Class I in the United States, August 1968, page 9). Stock car numbers also declined during 1967, reflecting a decreased demand for rail transportation of live animals.

The number of freight cars owned by car companies and shippers increased from 1966 to 1967 by substantially more than 8,000 cars, of which 3,734 were covered hopper cars. Holdings of equipped boxcars and covered hopper cars by this category of owners also showed the greatest percentage increases.

Effective Capacity

Car numbers are not the only or necessarily the best measure of the railroads ability to carry freight. Table 12 shows that, despite the reduction in number of freight cars, total capacity increased by more than 2.4 million tons in 1967 over 1966. The net increase in capacity for all boxcars and covered hopper cars was 1.5 million tons. Many of the equipped boxcars, however, are designed to carry plywood or relatively fragile commodities and realistically should not be included in the grain-carrying fleet. Nevertheless, at a minimum, freight car capacity to carry grain (plain box and covered hoppers) increased approximately 6000,000 tons during 1967 (table 12).

Table 12 reflects only a capacity potential at one point in time. It is not a measurement of effective utilization of capacity to carry freight.

Table 11.--Estimated ton-miles of intercity freight traffic, by mode,
average 1950-59, annual 1960-67

Year	Railway	Motor vehicles	Inland waterways	Pipelines	Airways	Total ^{1/}
	Billions	Billions	Billions	Billions	Billions	Billions
Average:						
1950-59	610	225	194	188	0.486	1,218
1960	579	285	220	229	.778	1,314
1961	570	296	210	233	.895	1,310
1962	600	309	223	238	1.289	1,371
1963	629	332	234	253	1.296	1,450
1964	666	347	250	266	1.504	1,531
1965	709	388	262	306	1.91	1,668
1966	751	381	280	332	2.25	1,747
1967 ^{2/}	731	388	274	361	2.59	1,757

^{1/} Totals may not add due to rounding.^{2/} Preliminary.

Compiled from Transport Economics and annual reports, Interstate Commerce Commission.

Effective Supply

Many factors other than number and capacity of railcars have a role in determining the effective supply of rail transportation. For example, in a November 1966 article in this Situation, it was noted that cars moved between stations only about 5 percent of the time. Also between 1951 and 1955, hot boxes (overheated bearings) caused freight cars to be stopped an average of 41 times per million car miles traveled. In addition, the article pointed out that 5 percent of the freight car fleet would be unserviceable at any single time, and the average speed of freight trains was only 18 mph. The net result was that freight cars, on the average, generated only 965 ton-miles per day during 1951-55 (table 13).

By 1967, the hot set-out rate had declined to 0.54 times per million car miles. The other indicators showed less dramatic improvement. As a result of increased capacity and improved operations, such as rate and service adjustment made to improve utilization, a freight car produced 32 percent more ton-miles during 1967 than the 1951-55 average. New efforts started

recently to keep track of freight cars by automatic car identification devices may result in further improvements of car utilization.

However, shippers have not taken full advantage of increased car capacities. In 1967, load weight as a percentage of capacity was slightly higher than the 1951-55 average but lower than the 1961-65 average (table 13). Other practices of carriers, shippers, and receivers affect the quantity of transportation services which can be obtained from a given car fleet.

The Graduated Per Diem Scale

Effective January 1, 1964, the Association of American Railroads instituted a graduated scale of per diem rates (daily rentals a railroad pays another for use of its cars). Based on the depreciated value of the car, these rates vary from \$2.16 for cars valued at \$1,000 or less to \$12.18 for cars valued at more than \$35,000. Although a variable per diem scale should tend to result in purchase by the industry of the number and kind of cars which would maximize profits, it affords no assurance that the best regional or commodity

Table 12.--Freight cars operated by Class I railroads, other railroads, car companies and shippers, December 31, 1966 and 1967

Type of car and year	Cars operated by <u>1/</u>				Capacity of cars owned by Class I railroads <u>2/</u>	
	Class I railroads	Car companies and shippers	Other rail- roads	Total	Average	Aggregate
	<u>Number</u>	<u>Number</u>	<u>Number</u>	<u>Number</u>	<u>Tons</u>	<u>Tons</u>
Plain box cars						
1966	454,761	1,387	8,613	464,761	51.7	23,554,478
1967	427,206	531	8,426	436,163	52.4	22,489,426
Percent change ..	-6.0	-61.7	-2.2	-6.2	1.4	-4.5
Equipped box cars						
1966	125,891	490	459	126,840	59.8	7,490,660
1967	139,067	938	872	140,877	61.1	8,375,821
Percent change ..	10.5	91.4	90.0	11.1	2.2	11.8
Covered hopper cars						
1966	105,027	24,366	788	130,181	81.2	8,404,663
1967	118,960	28,100	893	147,953	85.8	10,128,724
Percent change ..	13.3	15.3	13.3	13.6	5.7	20.5
Refrigerator cars						
1966	49,016	68,905	441	118,362	59.8	2,841,902
1967	51,705	65,664	687	118,056	61.3	3,183,833
Percent change ..	5.5	-4.7	55.8	-0.2	2.5	12.0
Stock cars						
1966	19,078	567	---	19,645	40.8	790,713
1967	16,531	346	---	16,877	40.3	672,254
Percent change ..	-13.4	-39.0	---	-14.1	-1.2	-15.0
All freight cars						
1966	1,496,579	302,758	26,847	1,826,184	61.4	91,440,684
1967	1,482,161	311,418	26,566	1,820,145	63.5	93,861,099
Percent change ..	-1.0	2.9	-1.0	-0.3	3.4	2.6

1/ Yearbook of Railroad Facts, 1968 Edition, Association of American Railroads.

2/ Statistics of Railroads of Class I in the United States, Association of American Railroads, August 1968.

distribution of cars will exist at any point in time. Nor is there any assurance that the railroad industry's optimum coincides with that of grain or any other segment of shippers.

Table 14 shows a marked increase in purchases of relatively expensive rolling

stock since 1964. Since the number of plain box cars has continued to decline, the graduated per diem scale apparently has facilitated, to some extent, investment in specialized cars to meet shipper's demand, rather than in more general-purpose cars.

Table 13.--Measures of trends in freight car performance, averages 1951-55, 1961-65, annual 1966 and 1967

Item	Unit	Average 1951-55	Average 1961-65	1966	1967 ^{1/}
Average load per car	Tons	41.9	46.8	50.1	51.3
Load as a percentage of capacity	Pct.	78.0	81.8	81.6	80.8
Average speed of freight trains	M.p.h.	18.0	20.1	20.3	20.3
Hot box set-out rate per million car miles	---	^{2/} 41.3	1.23	.59	.54
Unserviceable freight cars as a percentage of total	Pct.	5.1	6.7	4.4	4.6
Net ton-miles per car day	---	965	1,106	1,310	1,277
Centralized traffic control truck - December 31	Miles	^{3/} 28,428	41,048	44,758	46,100

^{1/} Preliminary.^{2/} Year 1955.^{3/} December 31, 1955.Yearbook of Railroad Facts, 1968 Edition, Association of American Railroads.

Table 14.--Annual increase in numbers of selected freight car types operated by Class I railroads, 1961-1967

Annual change from--	Special service boxcars	Covered hopper cars	Refrigerator cars
	<u>Number</u>	<u>Number</u>	<u>Number</u>
1961 to 1962	5,789	3,492	1,403
1962 to 1963	9,257	3,838	3,908
1963 to 1964	9,609	7,952	3,557
Average change	8,218	5,094	2,956
1964 to 1965	21,664	9,338	5,580
1965 to 1966	22,461	12,971	6,213
1966 to 1967	11,769	14,634	2,599
Average change	18,631	12,314	4,797

Statistics of Railroads of Class I in the United States, Association of American Railroads, August 1968.

X SYNTHETICS AND AGRICULTURAL SUBSTITUTES IN FOOD AND NONFOOD MARKETS X

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Synthetic products and agricultural substitutes are challenging agricultural products in their traditional markets. The fiber, feed, sugar, drying oil, dairy, soap, and animal product markets are faced with increased competition. Synthetic products are derived from nonagricultural materials. These products include urea, saccharin, cyclamates, poromerics, and acrylic fibers. Agricultural substitutes are made, partially or wholly, from one or several agricultural raw materials, and like most synthetics, simulate performance of traditional products. Examples of substitutes include filled milk and bacon-flavored vegetable protein resembling real bacon.

Forces Affecting the Emergence of Synthetics and Substitutes

New processing technologies, expanding consumer incomes, changing consumer preferences and desires, and in some cases lower manufacturing costs and greater product uniformity are all favorable conditions for expanding the number and output of synthetic and substitute food and non-food products. However, not all of these conditions need be present for every new product.

Processors of agricultural and non-agricultural materials apply new technologies to design new products with added quality, performance, functional properties, and esthetic appeal. In doing so, they expand the variety of products offered, develop new sources of raw materials that lower manufacturing costs, or add desirable product attributes, such as convenience, to consumer products.

Synthetics and Substitutes in Agricultural Commodity Markets

The major agricultural commodity markets in which synthetics and substitutes have made significant inroads are presented in table 15.

The market losses were estimated by computing three trends for the 1957-59 through 1967 period. These were: (1) Total volume of agricultural and synthetic or substitute products marketed, (2) market volumes of the agricultural product being displaced, and (3) the expected market volume based on the 1957-59 market share relationship. The market loss for the agricultural product in 1967 was assumed to be the difference between the expected trend value and the trend value of actual agricultural marketings. A different base period was used for those markets in which data were not available over the 1957-59 to 1967 period. These markets are noted in the footnotes to table 15.

This procedure probably overestimates losses in some markets because it only partially recognizes the possibility that synthetics and substitutes develop new outlets that expand the total market rather than replace agricultural products. On the other hand, the estimates are for one year only.

Fiber Markets. Synthetic fibers such as nylon, polyester, acrylic, olefins and rayon compete with cotton and wool. The market losses attributable to synthetics in 1967 are estimated at approximately 2.0 billion pounds (88 percent cotton and 12 percent wool) or \$632 million (72 percent cotton and 28 percent wool). Cotton's share of the textile market in 1967 had declined to 50 percent, despite absolute increases in the volumes of cotton marketed. Wool's market share declined to 5 percent. The volume of wool marketed has remained at about 513 million pounds annually.

Sugar Markets. Noncaloric saccharin and cyclamates compete with cane and beet sugar for a share of the sweetener market. Market loss for sugar due to these two competitors is estimated at 370,000 tons or \$76 million for 1967.

Table 15.--Estimated loss of traditional agricultural markets to synthetics and agricultural substitutes and total agricultural market, 1967

Agricultural product or market	Unit	Market loss		Estimated
		Quantity	Value ^{1/}	total market ^{1/}
			Mil. dol.	Mil. dol.
Cotton	Mil. lb.	1,780	456	1,124
Wool	Mil. lb.	235	176	385
Cane and beet sugar	Thou. dol.	370	76	1,954
Oilseed meal	Thou. dol.	358	30	537
Fats and oils for soap ^{2/}	Mil. lb.	460	31	53
Drying oils for paints ^{3/}	Mil. lb.	248	32	64
Glycerine	Mil. lb.	46	7	25
Starch for dextrin for adhesives ^{4/}	Mil. lb.	54	4	43
Soya meal and casein for adhesives ^{4/} ...	Mil. lb.	76	6	24
Leather for shoe uppers ^{5/}	Mil. sq. ft.	51	31	491
Citrus ^{6/}	Mil. gal.	52	45	334
Fluid milk ^{7/}	Mil. lb.	12	1	3,162
Total			895	8,196

^{1/} Prices used to compute value were:

Cotton - 25.6 cents per lb.
Wool - 75.0 cents per lb.
Sugar - 10.2 cents per lb.
Oilseed meal - \$83.20 per ton
Fats and oils - 6.7 cents per lb.
Drying oils - 12.9 cents per lb.
Glycerine - 16.1 cents per lb.
Starch and dextrin - 7.5 cents per lb.
Soya meal and casein - 7.5 cents per lb.
Leather - 60.0 per sq. ft.
Citrus - 85.7 cents per gal.
Fluid milk - \$5.43 per cwt.

^{2/} Fats and oils used in soaps related to total sales of soap and detergents.

^{3/} Drying oils used in paints related to total paint sales.

^{4/} Market share relationship existing in 1962 applied to 1967.

^{5/} Market share relationship existing in 1965 applied to 1967.

^{6/} The market loss in 1967 is assumed to be equal to synthetic drink sales.

^{7/} The market loss in 1967 is assumed to be equal to known filled milk sales during November and December 1967. This value is understated since synthetic milk sales and total filled milk sales are not available.

Sugar market loss may be overstated since dextrose from cereal starches also has a share of the total sweetener market and because of the rapid expansion in the diet and health food market. In addition, the sugar market loss may be overstated by the estimating procedure used because the full impact of noncaloric sweetener use did not occur until 1963.

Oilseed Meal Markets. Urea competes with oilseed meals in feeds for cattle and sheep. This oilseed market expanded from 4.5 million tons in 1957-59 to 7.3 million in 1967, or slightly over 62 percent. Over the same period, the use of high-protein meals in ruminant feeds increased from 4.0 million tons to 6.2 million tons, or by 55 percent. Thus, oilseed meals' share of the market declined. Market losses due to reported trends in the use of feed grade urea are estimated at 358,000 tons, or approximately \$30 million worth of high-protein meals.

The market loss due to urea probably is much larger than shown here. Labeling of urea as to feed or fertilizer grades does not restrict how it is used. Therefore, some fertilizer grade urea probably is used to formulate feeds. There are no official estimates available on the use of fertilizer grade urea in feeds. However, if urea had been used up to maximum permissible limits (approximately 1/3 of the protein in ruminant rations) approximately 423,000 tons of urea could have been fed in 1966 in contrast to the 180,000 tons of feed grade urea used. There are indications that actual feeding practices are trending toward the upper limit.

Fats and Oils Markets. The uses of animal and vegetable fats and oils in the soap, detergent, and paint markets have declined. The declining use of fats and oils for soaps and detergents is attributable to the rising use of petroleum-derived alcohols, lignin sulfonates, phosphates, and other raw materials. The declining use of drying oils from oilseeds in paints is attributable to the increasing use of tall oil and a change in product formulations to latex emulsion paints, and to alkyds, that often use fatty acids from soybeans, tallow, or tall oil. The

estimated 1967 loss in these two markets is 708 million pounds or \$63 million.

Glycerine Market. Natural glycerine is produced as a byproduct of the soap-making and fatty-acid industries and competes with a synthetic glycerine manufactured from petroleum raw materials. The declining use of fats and oils in the soap industry adversely affected the production of natural glycerine. Thus, the result has been a market loss of 46 million pounds or slightly more than \$7 million for 1967.

Adhesive Markets. Starch, dextrin, soya meals, and casein compete with synthetic resins in the adhesive industry. The use of these agricultural materials has been expanding, but at a lower rate than the use of synthetic materials. Market losses due to synthetics are estimated at 130 million pounds or \$10 million for 1967.

Shoe Upper Market. Natural leather competes with poromerics, vinyls, and fabric for a share of the shoe upper market. The market loss attributable to these synthetics is estimated at 51 million square feet or \$31 million for 1967.

Citrus Markets. Frozen concentrated, chilled, and canned natural orange juices compete with frozen concentrated and powdered synthetic drinks for a share of the retail fruit beverage market. The 52 million gallons of synthetic drinks sold in this market during 1967 are assumed to be the market loss for natural juices. This represents \$45 million for 1967. This loss could be overstated because synthetic drinks may have developed new market outlets.

Dairy Market. Filled milks in which dairy fats are replaced with vegetable fats, and imitation milks using no dairy ingredients, are competing for a share of the fluid milk market. The known volume of filled milk sold in November and December 1967 amounted to 12.3 million pounds. The farm value of these known filled milk sales (based on a Class I price of \$5.43 per 100 pounds) was approximately \$1 million for these two months.

Implications for Agriculture

Despite market inroads made by synthetics and substitutes, total physical volume of agricultural marketings has expanded since 1957-59. However, the economic effects of increased competition from synthetics and substitutes vary by commodity. Some are being replaced in specific end-uses, marketing of others is expanding at a slower rate than could be expected if replacements were not available and some have been unaffected up to this time.

Synthetics that replace agricultural commodities without expanding the total market represent a direct loss to agriculture. In contrast, substitutes formulated from components of several agricultural commodities may partially replace a traditional commodity without affecting the total volume of agricultural marketings. Substitutes, however, affect the competitive relationships among the various agricultural commodities.

Synthetics and substitutes have had little effect on the market channels for food commodities. This is primarily due to the small number of synthetic foods available and the nature of substitutes. Noncaloric sweeteners are the major synthetic food products now available. Substitutes formulated from accepted agricultural commodities are readily incorporated into food product lines and distributed through established marketing channels or outlets. Examples are filled milk, margarine, and synthetic orange juices. Most synthetic and substitute foods have been developed and marketed by well-established food processing and distribution firms that have sufficient financial resources necessary for the development and promotion of new food products. Future synthetic and substitute foods could be expected to follow a similar pattern.

The development and marketing of new foods will continue to be a major market strategy by food companies for gaining a share of the expanding food market. A majority of these products will likely be substitutes formulated from components of several agricultural commodities and minor amounts of additives such as synthetic flavors, colorings, vitamins, and minerals. Among other things, this allows

the manufacturer to incorporate "built-in" services, and to differentiate products from those of competitors. The continued proliferation of food substitutes could further affect conventional food products. Consumer choices may become more complex, competition for retail shelf space will be intensified, and the failure rate of the new substitutes may increase. The development of new foods from synthetic raw materials is expected to be minimal over the next several years.

In nonfoods, the technical and financial capabilities of most manufacturing firms assure a continued stream of synthetic products that compete with agriculture products. In general, these firms use raw materials without regard to origin, if their technical performance is adequate and raw material costs can be lowered.

Agricultural firms processing single commodities for nonfood uses can be expected to decline. An alternative for these types of firms is to adopt multi-product lines and to expand their raw materials requirements to include synthetic materials.

The introduction of synthetic materials may extend the marketing channel for agricultural products used for nonfood purposes. This will be due to the added processing required for agricultural products to successfully compete on a technical requirements basis with the synthetic. Some examples are fiber blending, chemical modification of drying oils and greater trim and shaping of hides for leather.

Several other changes can be anticipated if synthetics and substitutes capture a substantial share of all markets supplied by traditional agricultural products. Examples of such changes are accelerated obsolescence of agricultural processing plants, shifts in plant location, changes in inter-regional competition, and shifts in agricultural production input requirements. However, only selected markets have been eroded by synthetics and substitutes. Agricultural producers, processors, and marketers have partially adjusted to the new market environment.

EFFECT OF WEEKEND PRICES ON U.S. AVERAGE FOOD PRICES

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The accuracy of retail prices published by the Bureau of Labor Statistics for calculating the retail cost and farm-retail spread of the farm-food market basket has been questioned by food-industry groups and the National Commission on Food Marketing. The Commission alleged that retail prices and spreads are overstated --especially for beef, pork, and poultry-- because BLS prices do not include the total effect of weekend price specials. 1/

Because of the points raised by the Commission, the Economic Research Service contracted with BLS to collect weekend prices from all of their sample stores and to determine the frequency with which special prices are offered. The objectives were to determine (1) the difference between weekend prices and first-of-week prices, (2) if U.S. average prices might be lowered significantly by including weekend prices from all stores, and (3) the effect of giving weekend prices additional weight in U.S. averages. This article presents findings of this special BLS survey.

Some Aspects of BLS Pricing

Pertinent aspects of the procedure used by BLS to estimate U.S. average prices for food will be discussed before findings of the survey of weekend prices are presented. 2/ The primary purpose for which retail food prices are collected is to construct the food-at-home index, a component of the Consumer Price Index, which is released monthly by BLS. The food-at-home index measures month-to-month changes

in food prices at retail. Prices for about 100 food items collected in 1,775 retail food stores in 56 cities are used to compute this index. The cities represent all urban areas in the United States. The sample of food stores in each city represents sales by chain, and large and small independent stores.

Each month BLS reporters collect food prices from sample stores in each city. Prices are usually collected on Tuesday, Wednesday, and Thursday of the first week of each month. Prices are averaged separately for each type of store. Chain store prices are weighted according to the relative importance of each chain to total chain sales in the city. Different weights are used for meats, produce, and grocery items. Stores within each of the independent groups receive equal weights. To obtain a city price, average prices from the 3 groups of stores are then weighted according to each group's share of total retail food sales for the city. In turn, these prices are weighted by population to obtain a U.S. average price.

All BLS food prices are collected according to specifications for each of the items priced. Reporters collect prices for items as close to specification as practicable to maintain comparability from month to month. Since specification pricing is practiced, average prices published by BLS may differ from those actually paid by consumers, who are at liberty to vary their purchases according to such things as changes in price, quality, and size.

1/ Organization and Competition in the Livestock and Meat Industry, National Commission on Food Marketing, Technical Study No. 1, June 1966, p. 72. The Commission concluded that BLS prices "which are gathered on Tuesdays, Wednesdays, and Thursdays, do not fully reflect the number of price specialized items that occur with higher frequency on Thursdays, Fridays, and Saturdays. Furthermore, the prices recorded by BLS price reporters are not weighted by the volume sold, which runs much higher for specialized than nonspecialized items. Bureau of Labor Statistics reported prices, therefore, overstate actual prices for items that are sold on weekend specials. The amount of the overstatement depends on the frequency and depth of price specials."

2/ For detailed description of BLS weighting procedures see, "Calculation of Average Retail Food Prices," by Doris P. Rothwell, Monthly Labor Review, January 1965. Also see BLS Handbook of Methods for Survey and Studies, Bulletin No. 1458, Bureau of Labor Statistics.

BLS prices do not include weekend prices from all sample stores because some are visited on Tuesday and Wednesday. Weekend specials generally do not go into effect until Thursday. To increase the proportion of weekend prices collected, BLS visits as many chain stores on Thursday as possible, because chains offer weekend special prices more frequently than independent stores. Retail food stores visited on Thursday account for 47 percent of the total weight of sample stores and 73 percent of the chain-store weight. This means that weekend prices have more weight in BLS price averages than if sample stores having a third of the weight were priced on each of the 3 pricing days.

BLS does not weight its store prices by actual volume sold. Stores have the same weight from one period to another regardless of whether they have price specials. When stores advertise price specials on items, particularly meats and poultry, sales of these items often increase substantially. Simultaneously, sales of competing nonspecialized products in the store decline. To calculate accurate weighted averages, actual quantities sold would have to be used as weights.

BLS Weekend Pricing Study

The study covered 18 food items retailers frequently offer at special sale prices (table 16). Prices were collected in approximately 1,500 sample stores in 56 cities. ^{3/}

The collection of weekend prices for this study was done during regular BLS pricing weeks. Since each store was visited only once, Friday prices from the previous week were used to represent "weekend prices." ^{4/} Friday prices were

obtained by questioning store personnel. A first-of-week price was calculated from prices in effect on Monday, Tuesday, and Wednesday of the week that BLS enumerators visited the store. For stores priced by BLS on Thursdays, first-of-week prices were also recalled by store personnel.

Survey average prices, city as well as U.S. averages, were computed by using weights and procedures within the framework of the BLS weighting system. Prices collected were not weighted by actual volume sold in each survey week because volume data were not available. In keeping with BLS procedures, individual items, stores, and cities had the same weight from one period to another regardless of price specials and changes in volume sold.

Two methods were used to combine the first-of-week prices and weekend prices into a U.S. average. In one method, BLS weighting procedures were approximated. In the other method, weights assigned weekend prices were increased to twice the weight of the first-of-week prices. The second method gave the weekend price, and thus price specials, a greater weight in the U.S. average.

Differences Between First-of-Week and Weekend U.S. Average Prices

First-of-week and weekend U.S. average prices were compared for each item studied to ascertain if weekend prices were lower than first-of-week prices. In general, they were, but only slightly (table 16). For beef, pork, and poultry items, about three-fourths of the weekend prices were lower than the corresponding first-of-week prices. Of the prices that were lower at the end of week, about 60 percent of the decreases were 1 percent or less. Decreases for the remaining 40

^{3/} This survey did not include the full BLS sample of retail food stores. One chain store which reports prices to BLS by mail was excluded from the survey as were others, both chain and independent, which failed to provide BLS with both weekend and first-of-week prices.

^{4/} Dates for regular BLS pricing and the previous Friday, respectively, for the 5 periods studied were as follows: May 2-4 (regular) and April 29 (Friday), 1966; September 5-7 and 2, 1966; November 1-3 and October 28, 1966; February 7-9 and 3, 1967; and May 1-3 and April 28, 1967. Hereafter, these data will be identified by BLS pricing month.

A more valid price comparison would have been possible, had all prices been obtained within the same week. A latter section of this article, "Reliability of Recall Prices," however, concludes that the use of prices from the previous Friday probably did not affect the results of the study.

Table 16.--Retail prices per pound of selected food items, first-of-week, weekend, and weighted weekly, selected months of 1966 and 1967 1/

Food and month	First-of-week average	Weekend average	Weekly average			Percentage difference 4/
			Weighted by	Weighted to		
			time-of-week sales volume 2/	approximate BLS price 3/		
	Cents	Cents	Cents	Cents	Percent	
Round steak:						
May 1966	111.78	111.26	111.4	111.6	0.2	
September 1966	109.31	107.45	108.1	108.6	.5	
November 1966	110.06	108.86	109.3	109.3	0	
February 1967	108.62	107.51	107.9	108.1	.2	
May 1967	107.43	106.51	106.9	107.1	.2	
Sirloin steak:						
May 1966	114.68	114.82	114.8	114.5	-.3	
September 1966	120.58	116.12	117.6	119.1	1.3	
November 1966	120.45	120.86	120.7	120.6	-.1	
February 1967	120.48	116.92	118.1	118.7	.5	
May 1967	117.51	118.53	118.2	117.9	-.3	
Porterhouse steak:						
May 1966	139.46	138.29	138.7	138.9	.1	
September 1966	139.17	134.99	136.4	137.7	1.0	
November 1966	136.43	136.26	136.3	136.2	-.1	
February 1967	136.64	133.49	134.5	134.9	.3	
May 1967	133.85	134.56	134.3	134.1	-.1	
Rump roast:						
May 1966	111.85	111.74	111.8	111.8	0	
September 1966	109.70	108.29	108.8	109.1	.3	
November 1966	108.86	107.52	108.0	108.1	.1	
February 1967	106.19	105.61	105.8	105.9	.1	
May 1967	105.57	105.25	105.4	105.4	0	
Rib roast:						
May 1966	96.59	95.85	96.1	96.4	.3	
September 1966	94.41	94.11	94.2	94.3	.1	
November 1966	93.79	93.84	93.8	93.8	0	
February 1967	94.68	94.03	94.3	94.4	.1	
May 1967	94.53	93.76	94.0	94.2	.2	
Chuck roast:						
May 1966	65.60	64.19	64.7	65.2	.8	
September 1966	63.34	62.54	62.8	63.1	.5	
November 1966	62.91	61.56	62.0	62.1	.2	
February 1967	62.68	61.57	61.9	62.2	.5	
May 1967	60.78	59.84	60.2	60.3	.2	
Hamburger:						
May 1966	56.05	55.94	56.0	56.0	0	
September 1966	57.67	57.12	57.3	57.5	.3	
November 1966	57.34	56.89	57.0	57.2	.4	
February 1967	56.87	56.48	56.6	56.7	.2	
May 1967	56.25	56.02	56.1	56.2	.2	
Beef liver:						
May 1966	63.97	63.84	63.9	63.9	0	
September 1966	62.66	62.57	62.6	62.5	-.2	
November 1966	62.97	63.11	63.1	63.0	-.2	
February 1967	62.46	62.21	62.3	62.4	.2	
May 1967	61.42	60.93	61.1	61.2	.2	
Pork chops:						
May 1966	101.59	100.81	101.1	101.1	0	
September 1966	108.47	108.75	108.7	108.6	-.1	
November 1966	103.85	101.84	102.5	102.9	.4	
February 1967	98.90	98.35	98.5	98.7	.2	
May 1967	94.11	92.83	93.3	93.5	.2	
Pork roast:						
May 1966	75.10	75.07	75.1	75.1	0	
September 1966	77.93	78.21	78.1	78.0	-.1	
November 1966	76.31	75.41	75.7	75.9	.3	
February 1967	71.91	71.83	71.9	71.8	-.1	
May 1967	68.50	68.39	68.4	68.5	.1	

Continued--

Table 16.--Retail prices per pound of selected food items, first-of-week, weekend, and weighted weekly, selected months of 1966 and 1967 1/--Continued

Food and month	First-of-week average	Weekend average	Weighted by time-of-week : sales volume : 2/	Weighted to approximate BLS price : 3/	Percentage difference 4/
	Cents	Cents	Cents	Cents	Percent
Pork sausage:					
May 1966	75.97	76.17	76.1	76.0	-0.1
September 1966	74.00	73.97	74.0	74.0	0
November 1966	73.19	72.77	72.9	73.0	.1
February 1967	68.30	68.41	68.4	68.3	-.1
May 1967	67.35	67.27	67.3	67.3	0
Whole ham:					
May 1966	73.32	73.18	73.2	73.2	0
September 1966	73.45	73.16	73.3	73.3	0
November 1966	71.78	71.80	71.8	71.8	0
February 1967	72.17	71.82	71.9	72.0	.1
May 1967	68.16	67.07	67.4	67.5	.1
Picnics:					
May 1966	54.59	54.20	54.3	54.4	.2
September 1966	53.51	53.53	53.5	53.5	0
November 1966	53.08	53.15	53.1	53.1	0
February 1967	50.41	49.85	50.0	50.2	.4
May 1967	48.22	47.80	47.9	48.0	.2
Bacon:					
May 1966	94.27	94.09	94.2	94.2	0
September 1966	101.52	101.13	101.3	101.3	0
November 1966	89.21	90.38	90.0	89.8	-.2
February 1967	83.20	83.03	83.1	83.1	0
May 1967	81.74	81.52	81.6	81.6	0
Frying chickens:					
May 1966	42.60	41.51	41.9	42.2	.7
September 1966	42.13	40.48	41.1	41.6	1.2
November 1966	39.11	38.46	38.7	38.9	.5
February 1967	39.40	37.76	38.3	38.6	.8
May 1967	39.24	38.30	38.6	38.8	.5
Turkey:					
May 1966	50.64	50.61	50.6	50.6	0
September 1966	49.98	49.18	49.4	49.7	.6
November 1966	50.97	50.78	50.8	50.9	.2
February 1967	50.09	50.37	50.3	50.2	-.2
May 1967	49.01	48.93	49.0	49.0	0
White bread:					
May 1966	22.23	22.24	22.2	22.2	0
September 1966	23.63	23.57	23.6	23.6	0
November 1966	23.29	23.35	23.3	23.3	0
February 1967	23.24	23.17	23.2	23.2	0
May 1967	23.11	23.00	23.0	23.1	.4
Whole wheat bread:					
May 1966	28.26	28.23	28.2	28.2	0
September 1966	30.07	30.07	30.1	30.1	0
November 1966	29.99	29.78	29.9	29.9	0
February 1967	30.04	30.08	30.1	30.1	0
May 1967	29.81	29.82	29.8	29.8	0

1/ Based on data from special survey by BLS of weekend prices for selected foods in May, September, and November 1966, and February and May 1967.

2/ Weekend prices received two-thirds of weight and first-of-week prices one-third to approximate distribution of weekly retail sales.

3/ Weekend prices given weight assigned to stores priced on Thursday and first-of-week prices given weight of stores priced on Tuesday and Wednesday in calculation of regular BLS prices.

4/ 100 X Col. 4 - 100
Col. 3

percent were more significant--ranging from 1 to 4 percent. Bread prices showed very little difference between first of week and weekend.

Weekend prices for frying chickens consistently ranged from about 2 to 4 percent lower than first-of-week prices. Turkey prices averaged lower on weekends in four out of the five periods--less than 1 percent lower in three periods and 1 to 2 percent lower in a fourth period.

Lower weekend prices were more frequent and greater for beef items than for pork items. Forty comparisons were available for beef (eight items in five periods) and 30 for pork (six items in five periods). In slightly more than a third of the comparisons for beef, weekend prices were 1 to 4 percent lower than first-of-week prices, compared with a sixth of those for pork. For both beef and pork, in about half the comparisons, weekend prices were less than 1 percent lower than first-of-week prices. For about one-third of the comparisons for pork and about one-sixth for beef, weekend prices were either the same or higher than first-of-week prices.

Differences between first-of-week and weekend prices varied by type of food store. Average price differences generally were greater in chain and large independent stores than in small independent stores. Weekend prices for pork were down 0.4 percent in chain stores, compared with 0.2 percent in large independent stores. However, weekend prices for beef averaged about 1 percent lower than first-of-week prices in both the chain and large independent stores. Price differences for frying chickens in chain stores were consistently greater than in independent stores. Weekend prices for frying chickens in chain stores averaged 4.8 percent lower than first-of-week prices, compared with 2.4 percent for large independents, and 1.6 percent for small independents.

Differences between first-of-week and weekend prices were considerably larger in some cities than for the U.S. averages (table 17). Weekend prices were generally lower, although some weekend prices were higher than first-of-week prices.

Identical items are not specialized at the same time in all cities. Therefore, special weekend prices for an item in several cities, when averaged with prices in other cities, usually had a relatively minor effect on the U.S. average price.

Frequency of Specialing

The BLS compiled data showing the frequency of special-sale prices at the beginning and end of the week for beef, pork, poultry, and bread for each of the five periods in 12 major cities. (Table 18 shows data for beef, pork, and poultry in two cities.) ^{5/} Stores frequently offered first-of-week sales, but, as one would expect, a higher percentage offered price specials at the end of the week. However, because special sale prices were offered during both parts of the week, observed differences between first-of-week and weekend prices were decreased. Chain stores offered more sale prices than either large or small independent stores.

Significant differences in the number of sale prices offered were found among items and among cities. Specialing tended to be more frequent for beef than for either pork or poultry. Bread was frequently offered at special prices in only two cities--Chicago and Los Angeles. Sale prices were reported more frequently on more items in Los Angeles than in any of the other cities.

The effect of special sale prices on the U.S. average price for an individual item depended mainly on the number of stores offering the special, their relative weight in a city sample, and

^{5/} Data on frequency of specialing are the percentages of total city store-weight, by type of store, accounted for by stores featuring special prices. These data do not reflect depth of the price cut.

Table 17.--Retail prices per pound of 5 food items in major cities, first-of-week, weekend, and weighted weekly, selected months of 1966 and 1967 1/

City and food item	First-of-week average	Weekend average	Weekly average		
			Weighted by	Weighted to	Percentage
			time-of-week	approximate	difference
			sales volume	BLS price	<u>4/</u>
			2/	3/	
	Cents	Cents	Cents	Cents	Percent
United States:					
Round steak	107.43	106.51	106.9	107.1	0.2
Rump roast	105.57	105.25	105.4	105.4	0
Pork chops	94.11	92.83	93.3	93.5	.2
Ham, whole	68.16	67.07	67.4	67.5	.1
Frying chickens ..	39.24	38.30	38.6	38.8	.5
Chicago:					
Round steak	92.67	92.38	92.5	92.5	0
Rump roast	95.28	93.50	94.1	94.3	.2
Pork chops	89.76	78.92	82.4	83.8	1.7
Ham, whole	65.54	64.27	64.7	64.9	.3
Frying chickens ..	38.43	34.91	36.0	36.5	1.4
Detroit:					
Round steak	95.90	95.00	95.3	95.4	.1
Rump roast	109.21	109.57	109.5	109.4	-.1
Pork chops	92.08	94.19	93.5	93.3	-.2
Ham, whole	74.78	75.91	75.6	75.4	-.3
Frying chickens ..	38.68	39.00	38.9	38.9	0
Los Angeles:					
Round steak	95.60	95.44	95.5	95.5	0
Rump roast	99.91	99.87	99.9	99.9	0
Pork chops	103.39	101.61	102.2	102.5	.3
Ham, whole	61.47	62.21	62.0	61.8	-.3
Frying chickens ..	37.51	36.73	37.0	37.1	.3
New York:					
Round steak	126.21	127.89	127.4	127.0	-.3
Rump roast	117.16	117.25	117.2	117.2	0
Pork chops	99.22	99.82	99.6	99.5	-.1
Ham, whole	69.91	68.62	69.0	69.3	.4
Frying chickens ..	41.25	40.95	41.1	41.1	0
Philadelphia:					
Round steak	118.80	118.19	118.4	118.5	.1
Rump roast	122.57	120.78	121.4	121.7	.2
Pork chops	104.48	97.23	99.6	101.0	1.4
Ham, whole	75.86	73.92	74.5	74.9	.5
Frying chickens ..	42.22	42.13	42.2	42.2	0
Boston:					
Round steak	122.36	126.57	125.2	125.0	-.2
Rump roast	102.82	106.74	105.5	105.3	-.2
Pork chops	90.78	93.38	92.6	92.4	-.2
Ham, whole	73.02	73.02	73.0	73.0	0
Frying chickens ..	43.43	40.74	41.6	41.7	.2
Pittsburgh:					
Round steak	105.58	100.58	102.2	103.9	1.7
Rump roast	110.85	107.89	108.8	109.8	.9
Pork chops	100.10	97.73	98.5	99.3	.8
Ham, whole	61.50	61.84	61.7	61.6	-.2
Frying chickens ..	37.76	37.94	37.9	37.8	-.3

Continued--

Table 17.--Retail prices per pound of 5 food items in major cities, first-of-week, weekend, and weighted weekly, selected months of 1966 and 1967 1--Continued

City and food item	First-of-week average	Weekend average	Weekly average		
			Weighted by	Weighted to	Percentage
			time-of-week	approximate	difference
			sales volume	BLS price	4/
			2/	3/	
	Cents	Cents	Cents	Cents	Percent
Cleveland:					
Round steak	94.74	97.36	96.5	96.3	-0.2
Rump roast	96.87	96.29	96.5	96.5	0
Pork chops	85.40	80.48	82.1	82.4	.4
Ham, whole	63.10	64.31	63.9	63.8	-.2
Frying chickens ..	35.53	35.53	35.5	35.5	0
Washington:					
Round steak	120.20	127.74	125.3	124.1	-1.0
Rump roast	116.52	115.58	115.9	116.0	.1
Pork chops	113.37	104.02	107.0	108.5	1.4
Ham, whole	77.44	69.45	72.0	73.3	1.8
Frying chickens ..	42.34	41.54	41.8	41.9	.2
Baltimore:					
Round steak	118.35	121.43	120.4	119.9	-.4
Rump roast	117.04	122.88	121.0	120.0	-.8
Pork chops	102.12	107.69	105.9	105.0	-.8
Ham, whole	77.77	73.15	74.6	75.4	1.1
Frying chickens ..	42.13	38.48	39.7	40.3	1.5
St. Louis:					
Round steak	113.97	105.83	108.4	111.0	2.4
Rump roast	110.65	106.74	108.0	109.2	1.1
Pork chops	98.67	97.23	97.7	98.2	.5
Ham, whole	69.92	69.92	69.9	69.9	0
Frying chickens ..	39.54	34.14	35.9	37.6	4.7
San Francisco:					
Round steak	114.35	110.71	111.9	112.6	.6
Rump roast	97.32	94.73	95.6	96.1	.5
Pork chops	105.46	110.97	109.2	108.1	-1.0
Ham, whole	70.22	69.81	69.9	70.0	.1
Frying chickens ..	44.10	43.12	43.4	43.6	.5

1/ Based on data from special survey by BLS of weekend prices for selected foods.

2/ Weekend prices received two-thirds of weight and first-of-week prices one-third to approximate distribution of weekly retail sales.

3/ Weekend prices given weight assigned to stores priced on Thursday and first-of-week prices given weight of stores priced on Tuesday and Wednesday in calculation of regular BLS prices.

4/ $100 \times \frac{\text{Col. 4}}{\text{Col. 3}} - 100$

Table 18.--Stores featuring special prices, as a percentage of total city store-weight, by type of store, 3 food items, New York and Los Angeles, selected months in 1966 and 1967

City, item, and month	Percentage of total city store-weight 1/					
	Chain		Large independent		Small independent	
	First-of-	Weekend	First-of-	Weekend	First-of-	Weekend
	week		week		week	
	Percent	Percent	Percent	Percent	Percent	Percent
<u>New York</u>						
Beef						
May 1966	11.0	5.2	5.1	21.3	5.5	5.4
September 1966	9.3	21.5	16.5	10.9	5.4	6.7
November 1966	21.0	18.6	9.7	14.1	3.9	6.0
February 1967	6.7	13.4	5.4	10.6	3.0	4.0
May 1967	22.6	14.9	14.0	11.9	7.2	6.0
Pork						
May 1966	8.3	6.8	9.4	2.8	5.3	3.5
September 1966	5.5	2.3	9.5	7.3	5.6	4.0
November 1966	16.9	8.8	6.4	2.9	5.0	4.6
February 1967	14.5	6.4	7.1	2.7	5.3	5.9
May 1967	11.5	10.1	7.2	13.3	8.3	8.7
Poultry						
May 1966	15.1	17.3	14.8	2.0	3.0	3.0
September 1966	6.8	15.9	13.4	24.7	7.0	7.0
November 1966	4.4	15.1	15.9	22.8	6.7	9.6
February 1967	13.2	21.2	18.8	5.0	4.8	8.7
May 1967	15.7	10.4	16.8	23.6	5.9	5.9
<u>Los Angeles</u>						
Beef						
May 1966	15.2	25.1	13.1	12.6	3.9	3.9
September 1966	19.9	34.8	11.9	15.7	1.1	8.6
November 1966	34.6	36.3	12.1	14.0	3.1	5.6
February 1967	26.1	27.7	11.6	16.1	2.5	10.6
May 1967	3.5	11.1	6.8	10.4	1.8	4.1
Pork						
May 1966	12.6	18.7	8.3	7.9	3.6	4.4
September 1966	9.9	12.6	4.6	7.4	2.9	2.9
November 1966	15.4	25.7	7.4	11.0	1.7	9.4
February 1967	5.7	6.8	10.0	11.4	5.7	9.8
May 1967	5.3	9.6	13.0	17.5	6.3	9.4
Poultry						
May 1966	26.8	26.2	7.2	5.4	10.0	26.7
September 1966	21.5	38.4	19.6	23.8	0	11.1
November 1966	12.6	15.2	8.4	8.4	0	14.3
February 1967	25.6	26.2	6.2	14.6	0	7.2
May 1967	7.6	25.2	9.5	11.9	2.8	5.6

1/ For an explanation of city store-weights see, Doris P. Rothwell, "Calculation of Average Retail Food Prices," Monthly Labor Review, Jan. 1965.

the depth of the price cut. Often only a few stores within a city offered specials at the same time for a given item. Therefore, when the sale prices were weighted together with regular prices from other sample stores, the effect of the sale price on the city average price was usually minor. In turn, when city averages were weighted into the U.S. average, the effect of specials was even less.

Effect of Giving Weekend Prices Additional Weight in the U.S. Average

To determine the effect of increasing the weight given weekend prices (within the framework of the BLS weighting scheme), two U.S. average prices were computed for each item (tables 16 and 17). In one average, the weekend prices were assigned twice the weight of the first-of-week prices. This weighting procedure gives greater weight to weekend prices than the regular BLS weighting procedures. ^{6/} The other U.S. average price was computed by using regular BLS weights to combine weekend prices and first-of-week prices. ^{7/} First-of-week prices were assigned the weight of stores regularly visited on Tuesday and Wednesday and weekend prices the weight of stores visited on Thursdays.

Increasing the weight of weekend prices had very little effect on the U.S. average price. Differences in the averages were less than 1 percent in practically all cases (table 16, col. 5). The small differences between weekend prices and first-of-week prices kept the averages nearly the same. Even giving weekend prices all the weight would not significantly affect the U.S. average price for most items. This can be observed by comparing the U.S. average weekend prices with the U.S. prices that approximate the BLS prices (tables 16 and 17, cols. 2 and 4).

Reliability of Recall Prices

Because weekend prices used in this study were recalled from the previous Friday, a detailed examination of price data for the 12 major cities was made to ascertain if recall prices were significantly different from those collected by BLS for use in the Consumer Price Index. This examination showed fairly close agreement between levels of prices collected on Thursday for inclusion in the CPI and those obtained by recall for the previous Friday. Variation between the two prices was greatest for individual stores--particularly chain stores because they offered more special sales than other sample stores. However, city averages of the previous Friday's prices and Thursday prices were not significantly different, and both were usually lower than averages of first-of-week prices.

Past Study of Weekend Prices

In selected months in 1956 and 1957, BLS conducted another study to ascertain if giving greater weight to weekend prices would affect the CPI. ^{8/} Data were collected in 10 cities for all food items included in the CPI. As in the present study, prices were obtained for the weekend preceding the regular BLS pricing week. At that time, BLS collected prices on Monday, Tuesday, and Wednesday of the week containing the 15th of the month. They found that substituting weekend prices for first-of-week prices changed the food-at-home index in these 10 cities only slightly. Weekend special prices made up $1\frac{1}{2}$ percent of all price quotations for all BLS food items in October 1956. They found that chain food stores specialized more items than independent stores, and also that kinds of items specialized and size of price reduction varied greatly among cities.

^{6/} Information supplied by the stores in which prices were collected indicates that first-of-week and weekend prices, at least for meats and poultry, should receive weights of roughly 33 and 67 percent, respectively. This weighting scheme takes into account a general increase expected in end-of-week sales volume. Individual sales-priced items were not weighted by actual volume sold.

^{7/} See "Calculation of Average Retail Food Prices," by Doris P. Rothwell, Monthly Labor Review, January 1965, for detailed discussion of BLS weighting procedures.

^{8/} "Weekend Prices of Food," Retail Food Prices by Cities, U.S. Department of Labor, Bureau of Labor Statistics, issues for August, September, and October 1956 and January, February, April, July, and October 1957.

The influence of weekend specialing was greater for the meat, poultry, and fish group and the fruits and vegetables group than for the other product groups. When weekend prices were substituted for first-of-week prices, indexes for these two groups changed more from the preceding period than those for other food groups and for the total food-at-home group. The effect of specialing for these product groups also varied widely among cities.

Significance of Findings

Differences between weekend and first-of-week U.S. average prices generally were small. Therefore, including weekend prices from all sample stores would not appreciably lower U.S. averages. Price differences were more consistent and larger for frying chickens than for beef or pork items. Price specials offered by some chain and large independent stores during the first of the week as well as the last of the week lessened the effect of observed differences between first-of-week and weekend prices.

Within the framework of the BLS pricing system, giving greater weight to weekend prices would not appreciably decrease average prices. Findings indicate

that BLS prices for beef, pork, and, to a greater extent, frying chickens are only slightly overstated because weekend prices are not collected in all sample stores. Because of the relatively small difference between first-of-week and weekend prices, even assigning full weight to weekend prices would not produce major differences in U.S. average prices. This study only partially answers the questions raised by the National Commission on Food Marketing, because BLS prices were not weighted by actual volumes sold.

Differences between first-of-week and weekend prices presented in this study are based on averages of prices from a sample of stores throughout the country. Such averaging necessarily masks some changes that may be much more pronounced for an individual store.

Research Underway

This study supplements other research underway in ERS to ascertain the full effect of price specials on average retail prices and marketing spreads for beef and pork. Preliminary results of this work were published in the November 1967 issue of the Marketing and Transportation Situation (MTS-167).

Table 19.--Farm food products: Retail cost, farm value of equivalent quantities sold by producers, byproduct allowance, farm-retail spread, and farmer's share of retail cost, July-September 1968

Product 1/	Farm product equivalent	Retail unit	Retail cost	Gross farm value	Byproduct allowance	Net farm value 2/	Farm-retail spread	Farmer's share
			Dollars	Dollars	Dollars	Dollars	Dollars	Percent
Market basket			1,128.37	---	---	443.80	684.57	39
Meat products			327.46	---	---	181.16	146.30	55
Dairy products			203.19	---	---	97.19	106.00	48
Poultry and eggs		Average quantities purchased per urban wage-earner and clerical-worker household in 1960-61	88.42	---	---	49.93	38.49	56
Bakery and cereal products 3/	Farm produce equivalent to products bought per urban wage-earner and clerical-worker household in 1960-61		170.20	---	---	32.16	138.04	19
All ingredients			---	29.14	4.54	24.60	---	14
Grain			252.00	---	---	64.91	187.09	26
All fruits and vegetables			128.17	---	---	39.67	88.50	31
Fresh fruits and vegetables			57.92	---	---	18.13	39.79	31
Fresh fruits			70.25	---	---	21.54	48.71	31
Fresh vegetables			---	---	---	---	---	---
Processed fruits and vegetables			123.83	---	---	25.24	98.59	20
Fats and oils			37.90	27.06	17.87	9.19	28.71	24
Miscellaneous products			49.20	---	---	9.26	39.94	19
			Cents	Cents	Cents	Cents	Cents	Percent
Beef, Choice grade	2.25 lb. Choice grade cattle	Pound	87.8	58.6	5.1	53.5	34.3	61
Lamb, Choice grade	2.37 lb. lamb	Pound	93.1	57.3	6.2	51.1	42.0	55
Pork	2.00 lb. hogs	Pound	68.0	41.9	4.4	37.5	30.5	55
Butter	Cream and whole milk	Pound	83.5	98.3	37.8	60.5	23.0	72
Cheese, American process	Milk for American cheese	$\frac{1}{2}$ pound	44.8	20.3	.8	19.5	25.3	44
Ice cream	Cream, milk, and sugar	$\frac{1}{2}$ gallon	80.7	---	---	26.2	54.5	32
Milk, evaporated	Milk for evaporating	$1\frac{1}{2}$ 5-ounce can	17.3	8.4	.2	8.2	9.1	47
Milk, fresh								
Home delivered	4.39 lb. Class I milk	$\frac{1}{2}$ gallon	60.5	---	---	26.9	33.6	44
Sold in stores	4.39 lb. Class I milk	$\frac{1}{2}$ gallon	54.1	---	---	26.9	27.2	50
Chickens, frying, ready-to-cook	1.37 lb. broiler	Pound	40.7	---	---	20.3	20.4	50
Eggs, Grade A large	1.03 dozen	Dozen	55.0	---	---	35.3	19.7	64
Bread, white								
All ingredients	Wheat and other ingredients	Pound	22.5	---	---	3.2	19.3	14
Wheat .....	.877 lb. wheat	Pound	---	2.8	.3	2.5	---	11
Bread, whole or cracked wheat .....	.708 lb. wheat	Pound	30.2	---	---	3.1	27.1	10
Cookies, cream filled .....	.528 lb. wheat	Pound	51.0	---	---	4.3	46.7	8
Corn flakes	2.87 lb. yellow corn	12 ounces	31.2	4/5.3	4/3.0	4/2.3	28.9	7
Flour, white	6.8 lb. wheat	5 pounds	58.3	---	---	19.9	38.4	34
Apples	1.04 lb. apples	Pound	27.9	---	---	7.0	20.9	25
Grapefruit	1.03 grapefruit	Each	18.2	---	---	5.2	13.0	29
Lemons	1.04 lb. lemons	Pound	25.9	---	---	7.8	18.1	30
Oranges	1.03 doz. oranges	Dozen	102.2	---	---	37.1	65.1	36
Cabbage	1.08 lb. cabbage	Pound	11.1	---	---	3.6	7.5	32
Carrots	1.03 lb. carrots	Pound	16.8	---	---	5.2	11.6	31
Celery	1.08 lb. celery	Pound	17.1	---	---	4.5	12.6	26
Cucumbers	1.09 lb. cucumbers	Pound	19.5	---	---	6.9	12.6	35
Lettuce	1.88 lb. lettuce	Head	26.9	---	---	8.9	18.0	33
Onions	1.06 lb. onions	Pound	14.9	---	---	4.4	10.5	30
Peppers, green	1.09 lb. peppers	Pound	34.0	---	---	10.6	23.4	31
Potatoes	10.42 lb. potatoes	10 pounds	83.3	---	---	24.1	59.2	29
Spinach .....	.71 lb. spinach	10 ounces	31.5	---	---	8.3	23.2	26
Tomatoes	1.18 lb. tomatoes	Pound	33.6	---	---	11.4	22.2	34
Peaches, canned	1.60 lb. Calif. cling peaches	No. 2 $\frac{1}{2}$ can	35.9	---	---	6.3	29.6	18
Pears, canned	1.85 lb. pears for canning	No. 2 $\frac{1}{2}$ can	54.1	---	---	13.0	41.1	24
Beets, canned	1.24 lb. beets for canning	No. 303 can	18.5	---	---	1.3	17.2	7
Corn, canned	2.495 lb. sweet corn	No. 303 can	24.5	---	---	3.0	21.5	12
Peas, canned .....	.69 lb. peas for canning	No. 303 can	24.9	---	---	3.8	21.1	15
Tomatoes, canned	1.84 lb. tomatoes for canning	No. 303 can	20.5	---	---	3.9	16.6	19
Orange juice concentrate, frozen ..	3.14 lb. oranges	6-ounce can	21.5	---	---	9.6	11.9	45
French fried potatoes, frozen	1.38 lb. potatoes	9 ounces	15.5	---	---	2.1	13.4	14
Peas, frozen .....	.70 lb. peas for freezing	10 ounces	20.9	---	---	3.7	17.2	18
Beans, dried	1.00 lb. Mich. dry beans	Pound	19.6	---	---	8.7	10.9	44
Margarine	Soybeans, cottonseed, and milk	Pound	27.7	19.8	13.7	6.1	21.6	22
Peanut butter	1.33 lb. peanuts	12-ounce jar	43.9	---	---	15.5	28.4	35
Salad and cooking oil	Soybeans, cottonseed, and corn	24-ounce bottle	52.9	42.7	31.9	10.8	42.1	20
Vegetable shortening	Soybeans and cottonseed	3 pounds	84.0	69.7	47.8	21.9	62.1	26
Sugar	Sugar beets and cane	5 pounds	61.0	25.6	1.6	5/24.0	5/37.0	39
Spaghetti with sauce, canned	Wheat, tomatoes, cheese, sugar	15 $\frac{1}{2}$ -ounce can	16.7	---	---	2.1	14.6	13

1/ Product groups include more items than those listed in this table. For example, in addition to the products listed--Choice beef, lamb, and pork (major products except lard)--the meat products group includes lower grades of beef, the minor edible pork products, and veal.

2/ Gross farm value adjusted to exclude imputed values of byproducts obtained in processing.

3/ For the bakery products group and the individual wheat products, gross farm value, byproduct allowance, net farm value, and farmer's share are based on the market price of wheat received by farmers plus the cost of the marketing certificate to millers. This cost is returned to farmers complying with the Wheat Program.

4/ Based on market price of corn received by farmers; no allowance made for price support payment received by farmers who comply with the Federal Feed Grain Program.

5/ Net farm value adjusted for Government payments to producers was 27.9 cents, farm-retail spread adjusted for Government processor tax was 34.3 cents, farmer's share of retail cost based on adjusted farm value was 46 percent.

Table 20.--Farm food products: Retail cost and farm value, July-September 1968, April-June 1968, July-September 1967, and 1957-59 average

Product 1/	Retail unit	Retail cost						Net farm value 2/					
		July-Sept. 1968	April-June 1968	July-Sept. 1967	1957-59 average	Percentage change: July-Sept. 1968 from-		July-Sept. 1968	April-June 1968	July-Sept. 1967	1957-59 average	Percentage change: July-Sept. 1968 from-	
						April-1968	July-1967					April-1968	July-1967
		Dollars	Dollars	Dollars	Dollars	Percent	Percent	Dollars	Dollars	Dollars	Dollars	Percent	Percent
Market basket		1,128.37	1,113.59	1,092.38	982.65	1	3	443.80	3/436.06	426.73	387.87	2	4
Meat products		327.46	321.99	323.76	285.05	2	1	181.16	171.50	177.98	154.47	6	2
Dairy products	Average	203.19	200.96	195.48	173.33	1	4	97.19	96.20	93.39	77.85	1	4
Poultry and eggs	quantities purchased	88.42	82.07	81.80	93.02	8	8	49.93	44.17	42.99	56.28	13	16
Bakery and cereal products 4/	per urban												
All ingredients	wage-earner	170.20	169.13	168.77	148.40	1	1	32.16	33.47	34.05	30.55	-4	-6
Grain	and	---	---	---	---	---	---	24.60	25.79	26.44	23.40	-5	-7
All fruits and vegetables	clerical-	252.00	252.29	235.69	202.96	5/	7	64.91	71.06	58.78	50.05	-9	10
Fresh fruits and vegetables ..	worker	128.17	129.26	119.88	91.15	-1	7	39.67	45.16	37.51	28.70	-12	6
Fresh fruits	household	57.92	53.53	49.12	36.26	8	18	18.13	19.74	14.86	12.26	-8	22
Fresh vegetables	in	70.25	75.73	70.76	54.89	-7	-1	21.54	25.42	22.65	16.44	-15	-5
Processed fruits and vegetables	1960-61	123.83	123.03	115.81	111.81	1	7	25.24	25.90	21.27	21.35	-3	19
Fats and oils		37.90	38.09	38.51	37.56	5/	-2	9.19	3/10.34	10.55	11.19	-11	-13
Miscellaneous products		49.20	49.06	48.37	42.33	5/	2	9.26	3/9.34	8.99	7.48	-1	3
		Cents	Cents	Cents	Cents	Percent	Percent	Cents	Cents	Cents	Cents	Percent	Percent
Beef, Choice grade	Pound	87.8	86.6	84.9	78.1	1	3	53.5	52.5	51.4	48.3	2	4
Lamb, Choice grade	Pound	93.1	92.7	89.7	70.0	5/	4	51.1	53.4	48.8	40.2	-4	5
Pork	Pound	68.0	66.4	69.4	60.5	2	-2	37.5	33.6	38.1	31.0	12	-2
Butter	Pound	83.5	83.5	82.8	73.2	0	1	60.5	60.3	61.2	52.6	5/	-1
Cheese, American process	1/2 pound	44.8	44.2	43.3	32.3	1	3	19.5	19.5	18.6	14.2	0	5
Ice cream	gallon	80.7	80.6	80.9	84.2	5/	5/	26.2	26.3	25.6	21.0	5/	2
Milk, evaporated	14 1/2-ounce can	17.3	17.0	16.8	14.5	2	3	8.2	8.4	7.9	6.2	-2	4
Milk, fresh													
Home delivered	1/2 gallon	60.5	59.6	57.0	50.8	2	6	26.9	26.4	25.6	21.9	2	5
Sold in stores	1/2 gallon	54.1	53.4	51.6	46.6	1	5	26.9	26.4	25.6	21.9	2	5
Chickens, frying, ready-to-cook ..	Pound	40.7	40.1	38.8	43.5	1	5	20.3	20.0	18.2	24.4	2	12
Eggs, Grade A large	Dozen	55.0	47.2	48.4	56.2	17	14	35.3	27.8	28.8	36.1	27	23
Bread, white													
All ingredients	Pound	22.5	22.2	22.1	18.5	1	2	3.2	3.3	3.4	3.0	-3	-6
Wheat	Pound	---	---	---	---	---	---	2.5	2.6	2.8	2.4	-4	-11
Bread, whole or cracked wheat ..	Pound	30.2	29.8	29.8	---	1	1	3.1	3.3	3.3	---	-6	-6
Cookies, cream filled	Pound	51.0	50.7	51.4	---	1	-1	4.3	4.5	4.4	---	-4	-2
Corn flakes	12 ounces	31.2	31.2	31.3	24.5	0	5/	2.3	2.5	2.7	2.4	-8	-15
Flour, white	5 pounds	58.3	58.6	59.4	53.3	-1	-2	19.9	20.8	21.6	18.8	-4	-8
Apples	Pound	27.9	25.1	23.8	16.1	11	17	7.0	10.8	6.7	5.0	-35	4
Grapefruit	Each	18.2	16.2	16.0	10.7	12	14	5.2	3.9	4.3	2.7	33	21
Lemons	Pound	25.9	27.2	23.7	18.4	-5	9	7.8	8.0	7.6	4.2	-2	3
Oranges	Dozen	102.2	91.1	78.2	66.0	12	31	37.1	26.5	21.9	23.2	40	69
Cabbage	Pound	11.1	12.5	10.4	8.7	-11	7	3.6	3.5	2.8	2.4	3	29
Carrots	Pound	16.8	17.0	16.5	14.5	-1	2	5.2	4.8	5.9	3.7	8	-12
Celery	Pound	17.1	16.6	17.8	15.3	3	-4	4.5	6.4	6.6	4.4	-30	-32
Cucumbers	Pound	19.5	30.1	19.9	---	-35	-2	6.9	9.7	7.2	---	-29	-4
Lettuce	Head	26.9	26.5	29.7	22.6	2	-9	8.9	7.8	8.7	6.0	14	2
Onions	Pound	14.9	17.4	13.9	10.1	-14	7	4.4	6.8	4.3	3.4	-35	2
Peppers, green	Pound	34.0	48.0	34.5	---	-29	-1	10.6	21.2	11.6	---	-50	-9
Potatoes	10 pounds	83.3	79.5	80.1	58.3	5	4	24.1	24.4	23.7	17.8	-1	2
Spinach	10 ounces	31.5	31.1	30.9	---	1	2	8.3	5.5	8.1	---	51	2
Tomatoes	Pound	33.6	44.0	36.4	30.1	-24	-8	11.4	18.1	14.4	10.6	-37	-21
Peaches, canned	No. 2 1/2 can	35.9	35.6	31.9	34.3	1	13	6.3	6.7	6.1	6.1	-6	3
Pears, canned	No. 2 1/2 can	54.1	54.1	45.3	---	0	19	13.0	15.9	11.5	---	-18	13
Beets, canned	No. 303 can	18.5	18.3	17.9	---	1	3	1.3	1.3	1.3	---	0	0
Corn, canned	No. 303 can	24.5	24.4	23.2	17.8	5/	6	3.0	2.9	2.8	2.4	3	7
Peas, canned	No. 303 can	24.9	24.8	24.9	21.0	2/	0	3.8	3.8	3.8	3.1	0	0
Tomatoes, canned	No. 303 can	20.5	20.6	19.7	15.6	5/	4	3.9	3.9	3.4	2.3	0	15
Orange juice concentrate, frozen	6-ounce can	21.5	20.9	17.4	23.4	3	24	9.6	9.9	4.5	8.2	-3	113
French fried potatoes, frozen ..	9 ounces	15.5	15.3	15.1	---	1	3	2.1	2.1	2.3	---	0	-9
Peas, frozen	10 ounces	20.9	20.8	20.5	19.9	5/	2	3.7	3.7	3.6	3.2	0	3
Beans, dried	Pound	19.6	19.5	18.0	16.3	1	9	8.7	8.5	7.3	6.9	2	19
Margarine	Pound	27.7	28.0	28.0	27.4	-1	-1	6.1	7.2	7.5	7.8	-15	-19
Peanut butter	12-ounce jar	43.9	43.8	44.0	41.4	5/	5/	15.5	15.2	15.1	14.1	2	3
Salad and cooking oil	24-ounce bottle	52.9	53.0	53.8	---	5/	-2	10.8	12.2	12.2	---	-11	-11
Vegetable shortening	3 pounds	84.0	84.1	87.1	90.4	5/	-4	21.9	25.4	26.2	28.2	-14	-16
Sugar	5 pounds	61.0	60.9	60.7	54.5	5/	5/	24.0	24.0	22.9	20.2	0	5
Spaghetti with sauce, canned	15 1/2-ounce can	16.7	16.8	16.4	---	-1	2	2.1	2.2	2.1	---	-5	0

1/ Product groups include more items than those listed in this table. For example, in addition to the products listed--Choice beef, lamb, and pork (major products except lard)--the meat products group includes lower grades of beef, the minor edible pork products, and veal.

2/ Gross farm value adjusted to exclude imputed value of byproducts obtained in processing.

3/ Many retail cost and farm value figures for July-September 1967 have been revised; figures in other columns revised as indicated.

4/ For the bakery products group and the individual wheat products, the farm value is based on the market price of wheat received by farmers plus the cost of the marketing certificate to millers. This cost is returned to farmers complying with the Wheat Program.

5/ Less than 0.5 percent.

Table 21.--Farm food products: Farm-retail spread and farmer's share of the retail cost, July-September 1968, April-June 1968, July-September 1967 and 1957-59 average

Product 1/	Retail unit	Farm-retail spread 2/						Farmer's share			
		July-Sept. 1968	April-June 1968	July-Sept. 1967	1957-59 average	Percentage change July-Sept. 1968 from-		July-Sept. 1968	April-June 1968	July-Sept. 1967	1957-59 average
						April-June 1968	July-Sept. 1967				
		Dollars	Dollars	Dollars	Dollars	Percent	Percent	Percent	Percent	Percent	Percent
Market basket		684.57	3/677.53	665.65	594.78	1	3	39	39	39	39
Meat products		146.30	150.49	145.78	130.58	-3	4/	55	53	55	54
Dairy products	Average quantities purchased	106.00	104.76	102.09	95.48	1	4	48	48	48	45
Poultry and eggs		38.49	37.90	38.81	36.74	2	-1	56	54	53	61
Bakery and cereal products 2/											
All ingredients	wage-earner and	138.04	135.66	134.72	117.85	2	2	19	20	20	21
Grain	clerical-	---	---	---	---	---	---	14	15	16	16
All fruits and vegetables	worker	187.09	181.23	176.91	152.91	3	6	26	28	25	25
Fresh fruits and vegetables ..	household	88.50	84.10	82.37	62.45	5	7	31	35	31	31
Fresh fruits	in	39.79	33.79	34.26	24.00	18	16	31	37	30	34
Fresh vegetables	1960-61	48.71	50.31	48.11	38.45	-3	1	31	34	32	30
Processed fruits and vegetables		98.59	97.13	94.54	90.46	2	4	20	21	18	19
Fats and oils		28.71	27.77	27.96	26.37	3	3	24	27	27	30
Miscellaneous products		39.94	3/39.72	39.38	34.85	1	1	19	19	19	18
		Cents	Cents	Cents	Cents	Percent	Percent	Percent	Percent	Percent	Percent
Beef, Choice grade	Pound	34.3	34.1	33.5	29.8	1	2	61	61	61	62
Lamb, Choice grade	Pound	42.0	39.3	40.9	29.8	7	3	55	58	3/54	57
Pork	Pound	30.5	32.8	31.3	29.5	-7	-3	55	51	55	51
Butter	Pound	23.0	23.2	21.6	20.6	-1	6	72	72	74	72
Cheese, American process	1/2 pound	25.3	24.7	24.7	18.1	2	2	44	44	43	44
Ice cream	1/2 gallon	54.5	54.3	55.3	63.2	4/	-1	32	33	32	25
Milk, evaporated	14 1/2-ounce can	9.1	8.6	8.9	8.3	6	2	47	49	47	43
Milk, fresh											
Home delivered	1/2 gallon	33.6	33.2	31.4	28.9	1	7	44	44	3/45	43
Sold in stores	1/2 gallon	27.2	27.0	26.0	24.7	1	5	50	49	50	47
Chickens, frying, ready-to-cook ..	Pound	20.4	20.1	20.6	19.1	1	-1	50	50	47	56
Eggs, Grade A large	Dozen	19.7	19.4	19.6	20.1	2	1	64	59	60	64
Bread, white											
All ingredients	Pound	19.3	18.9	18.7	15.5	2	3	14	15	15	16
Wheat	Pound	---	---	---	---	---	---	11	12	13	13
Bread, whole or cracked wheat ..	Pound	27.1	26.5	26.5	---	2	2	10	11	11	---
Cookies, cream filled	Pound	46.7	46.2	47.0	---	1	-1	8	9	9	---
Corn flakes	12 ounces	28.9	28.7	28.6	22.1	1	1	7	8	9	10
Flour, white	5 pounds	38.4	37.8	37.8	34.5	2	2	34	35	36	35
Apples	Pound	20.9	14.3	17.1	11.1	46	22	25	43	3/28	31
Grapefruit	Each	13.0	12.3	11.7	8.0	6	11	29	24	27	25
Lemons	Pound	18.1	19.2	16.1	14.2	-6	12	30	29	32	23
Oranges	Dozen	65.1	64.6	56.3	42.8	1	16	36	29	3/28	35
Cabbage	Pound	7.5	9.0	7.6	6.3	-17	-1	32	28	27	28
Carrots	Pound	11.6	12.2	10.6	10.8	-5	9	31	28	36	26
Celery	Pound	12.6	10.2	11.2	10.9	24	12	26	39	37	29
Cucumbers	Pound	12.6	20.4	12.7	---	-38	-1	35	32	36	---
Lettuce	Head	18.0	18.7	21.0	16.6	-4	-14	33	29	29	27
Onions	Pound	10.5	10.6	9.6	6.7	-1	9	30	39	31	34
Peppers, green	Pound	23.4	26.8	22.9	---	-13	2	31	44	34	---
Potatoes	10 pounds	59.2	55.1	56.4	40.5	7	5	29	31	30	31
Spinach	10 ounces	23.2	25.6	22.8	---	-9	2	26	18	26	---
Tomatoes	Pound	22.2	25.9	22.0	19.5	-14	1	34	41	40	35
Peaches, canned	No. 2 1/2 can	29.6	28.9	25.8	28.2	2	15	18	19	19	18
Pears, canned	No. 2 1/2 can	41.1	38.2	33.8	---	8	22	24	29	3/25	---
Beets, canned	No. 303 can	17.2	17.0	16.6	---	1	4	7	7	7	---
Corn, canned	No. 303 can	21.5	21.5	20.4	15.4	0	5	12	12	12	13
Peas, canned	No. 303 can	21.1	21.0	21.1	17.9	4/	0	15	15	15	15
Tomatoes, canned	No. 303 can	16.6	16.7	16.3	13.3	-1	2	19	19	17	15
Orange juice concentrate, frozen	6-ounce can	11.9	11.0	12.9	15.2	8	-8	45	47	26	35
French fried potatoes, frozen ..	9 ounces	13.4	13.2	12.8	---	2	5	14	14	15	---
Peas, frozen	10 ounces	17.2	17.1	16.9	16.7	1	2	18	18	18	16
Beans, dried	Pound	10.9	11.0	10.7	9.4	-1	2	44	44	41	42
Margarine	Pound	21.6	20.8	20.5	19.6	4	5	22	26	26	28
Peanut butter	12-ounce jar	28.4	28.6	28.9	27.3	-1	-2	35	35	34	34
Sals and cooking oil	24-ounce bottle	42.1	40.8	41.6	---	3	1	20	23	23	---
Vegetable shortening	3 pounds	62.1	58.7	60.9	62.2	6	2	26	30	30	31
Sugar	5 pounds	37.0	3/36.9	37.8	34.3	4/	-2	39	39	38	37
Spaghetti with sauce, canned	15 1/2-ounce can	14.6	14.6	14.3	---	0	2	13	13	13	---

1/ Product groups include more items than those listed in this table. For example, in addition to the products listed--Choice beef, lamb, and pork (major products except lamb)--the meat products group includes lower grades of beef, the minor edible pork products, and veal.

2/ The farm-retail spread is the difference between the retail cost and the net farm value shown in table on opposite page.

3/ Many farm-retail spread figures for July-September 1967 have been revised; figures in other columns revised as indicated.

4/ Less than 0.5 percent.

5/ For the bakery products group and the individual wheat products, the farmer's share is based on the market price of wheat received by farmers plus the cost of the marketing certificate to millers. This cost is returned to farmers complying with the Wheat Program.

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